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THE CANADA FARMER

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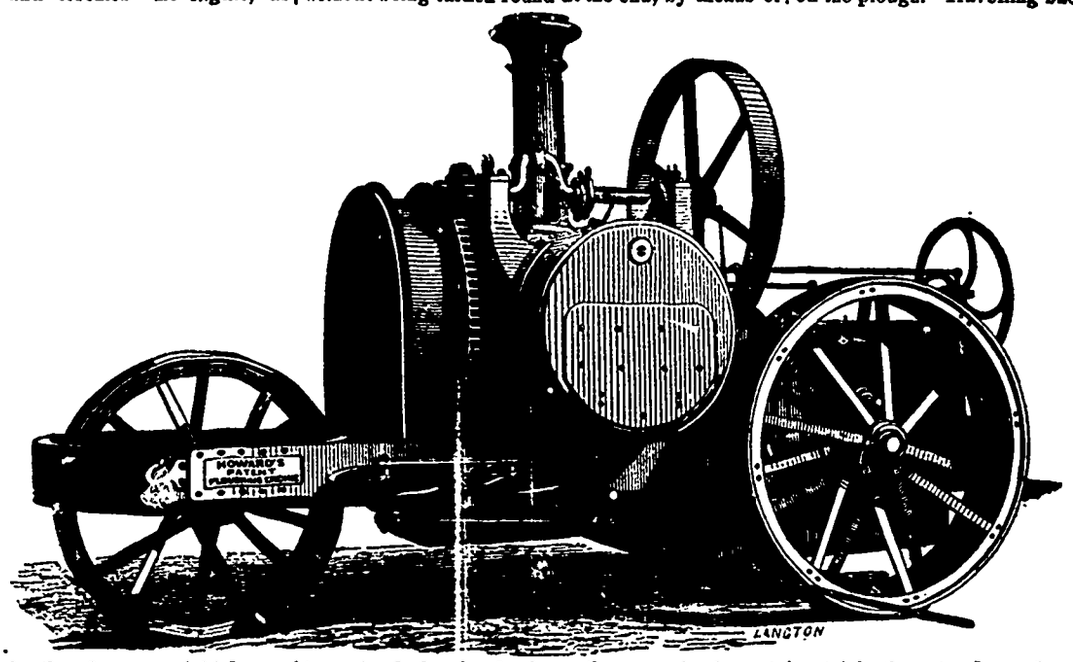
The Field.

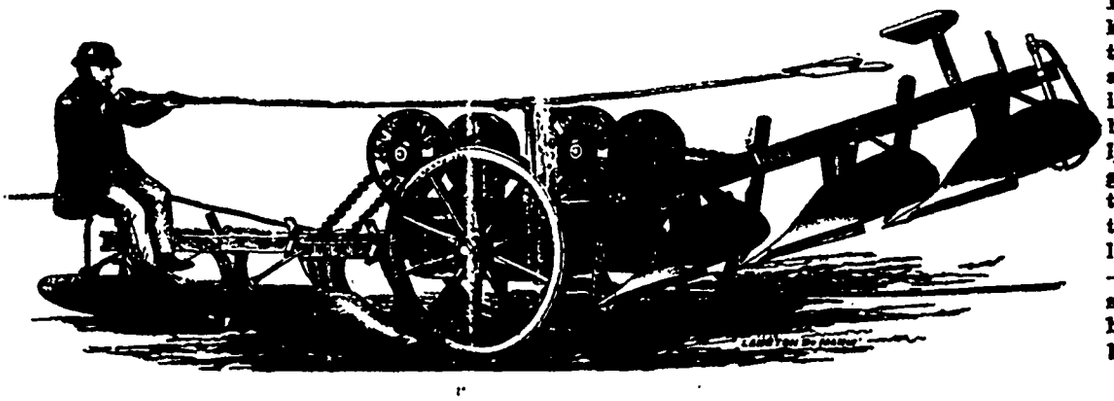
Steam Cultivation.

THE ENGINE.

In order that our readers may understand the merits and advantages of the different systems of steam cultivation, it is necessary that we briefly point out some of the leading peculiarities of the various implements that compose what is known as a "set of apparatus." First and foremost the engine, as the source of the Titantic energies employed, claims our attention. Engines have been constructed on a variety of principles. Public opinion in Britain, at the present time, however, seems to be declared in favour of three kinds,—Smith's, Fowler's, and Howard's. That of the first named maker differs chiefly from those of Fowler and Howard, in not being constructed on the locomotive principle. In other words, it has to be dragged by horses to the field where its power is to be employed. It is, therefore, as might be expected, more simple in its construction, and much more moderate in its cost. The necessity of having a pretty large team of horses always at hand when it is to be removed from field to field, and from farm to farm, is somewhat of a disadvantage. Still, as the steam-engine does not entirely supersede the use of horses on a farm, but only necessitates the employment of a lesser number, this defect, in all probability is not so great as, at first sight, might appear. The employment of horses, even when it is found necessary to hire them, is nearly, if not quite as cheap as the expense incurred by the consumption of fuel in producing the necessary driving power to travel from place to place. When we come to treat of the comparative prime cost, and expense of working the various systems of steam tackle, we may have something further to say in reference to the claims of Smith's engine on the agricultural community.

Fowler's engine, as we have already intimated, is constructed on the locomotive principle, and moves along the headland as the land is ploughed or cultivated. The plough, as in all the systems, is louble acting; or, in other words, works back and forward without being turned round at the end, by means of two sets of ploughs fixed on the same implement. Our second illustration, which represents Howard's plough, will render this explanation easily understood. The two sets of ploughs are constructed so as to balance on the wheels, and the weight of the ploughman, who steers the implement, is sufficient to introduce the plough-shares, and keep them in the soil at the required depth. When the headland is reached, he takes the seat, and grasps the guiding handle at the other end of the implement, and so on. In Fowler's system, therefore, the engine is at one end of the furrow, and the "anchor" at the other. The latter is a simple, but ingenious, self-acting mechanical contrivance. It is constructed with a drum on which the rope is wound, while by means of large plate-like flanges on its travelling wheels, which penetrate some ten inches into the soil, it moves along the headland, opposite to the engine, and offers the requisite amount of resistance to the power exerted on the plough. Travelling back and forward, then, between the engine and the anchor, the plough, or cultivator, may be said to be attached to an endless rope, which is wound off and on the two drums,—one at each end of the furrow. This steel wire rope is composed of several "lengths," and may be easily shortened or lengthened, to suit the dimensions of the field. Fowler's locomotive travels on four wheels, and the boiler, as in most agricultural engines, is placed transversely, or lengthwise, on the frame work. This arrangement, though certainly the natural one, has, as we shall presently see, some important drawbacks. In moving along headlands where, not unfrequently, steep inclines occur, a great variation of water level naturally takes place in the boiler. "In ascending an incline with the fire-box behind, we drown the steam space in its most productive positon, and in descending, we expose the crown of the fire-box to be burned." Every tyro in steam knows how important it is to secure a horizontal position for a tubular boiler. Consequently an engine-man, generally speaking, takes the precaution of "setting her looking a little up"—a phrase which simply signifies that he prefers the smoke box end to be just





a little more elevated than the fire-box end. With plenty of time, and any quantity of picks and shovels at command, it is, of course, quite possible to plant a stationary engine as firmly and as level on a hill side as on a bowling green. When, however, the engine has to advance a few feet along an inclined headland every two or three minutes, the level of the boiler must inevitably be altered at each onward movement. In such a case, the engine-man is entirely at the mercy of the slope he is working on, for the presence, or absence, of water upon the crown of the fire-box. At the same time, the possible over-heating, or proper cooling of the tubes, and the objectionable priming which takes place when the water level is too high at the fire-box end of the boiler, are entirely beyond his control.

In their engine, as represented in our first illustration, Messrs. Howard have entirely overcome those difficulties. Their arrangement simply consists in placing the boiler, with its cylinder and crank-shaft, *across* the frame work, instead of lengthwise, as in Fowler's engine. By this method the form and generally acknowledged advantages of the locomotive boiler are retained; while, on the steepest hill, the steam space is undiminished, and the water level never varies sufficiently to leave any part of the fire-box or tubes uncovered. "In case the field should slope in two directions, that is, if the surface inclines at right angles to the headland, one side of the carriage frame would be lower than the other, and consequently the boiler (set across it) would 'pitch.' But then headlands are rarely, if ever, flat; and the engine driver, by choosing the right or left-hand side of it, can, in most cases, ensure that the wheels on one side shall be level with those on the other." The engine is mounted upon three wheels, and hence it stands steadier on ground that is not perfectly level.

Both Howard's and Fowler's locomotives are adapted to work on the double system. By this arrangement, two engines are employed at the same plough. They work opposite to each other, and move forward on the headland as the work proceeds. By the employment of two locomotives, "anchor," "snatch-block," and "windlass" are unnecessary; while a considerable saving of time is effected. When they finish a field, one of them instantly marches off with the plough, cultivator or harrows, and the other winds up the furrows length of rope, and quickly follows. In commencing the next piece "there is nothing to be lowered into a hole in the hard ground, no heavy apparatus to be lugged round the field in a cart or waggon, to be left in instalments at the several corners, no rope to be trailed round the same journey by a pair of horses, no windlass to be carefully placed by 'backing' and 'locking,' &c., the wheels dropped into holes purposely dug, held by stakes driven down into the ground, attached to the engine by adjusted rod or chain, and the engine-wheels secured in position by wedges driven beneath their felloes. One engine enters the field, takes the implement and trailing-rope to the far side, while the other engine takes up its position on the near side, and without more ado the tillage begins."

PEAS AS A LAND-CLEANING CROP.—My peas yielded about thirty bushels per acre. But they are full of bugs! Can nothing be done to get rid of this pest? Late sowing is said to be a remedy, but it is often worse than the disease, as, if dry weather sets in, the crop will be light. A good, smothering crop of peas will sometimes clean the land as well as a summer fallow; but a light crop leaves it foul. Notwithstanding the bugs, I think that I have had no more profitable crop this season than these peas. I had forty-six loads of vines, nicely cured, bright and sweet, which I consider more nutritious than over-ripe and poorly-cured clover hay. There was an immense growth of vines, and they smothered the weeds. I ploughed the land twice after the crop was off, and as the Deacon says, it looks as well as a smart summer fallow, and in his opinion will give better wheat than if it had been "sun burnt."—*Harris's Walks and Talks.*

Rice and the Rice Crop.

The New-York *Journal of Commerce* has the following interesting article on this subject:

This grain, which is one of the staple productions of our country and an important article of commerce, it has been estimated, forms the principal food of at least one-third of the human race. Where it originated is not now known, but from time immemorial it has been the chief subsistence of the common people, and a prime article of diet with all classes in Southern and Eastern Asia, where it has been most extensively cultivated. It has been supposed by some that it was in common use amongst the ancients, and that it is mentioned in Scripture under a name that is not familiar at the present day. Its very early use is beyond question, but we have no definite accounts regarding it, as we have of some other grains, nor is it found, like wheat for instance, among the remains of antiquity. It probably had its origin somewhere in South-eastern Asia, and from there was introduced into Southern Europe, where it is cultivated to some extent, but it has never been produced or used so largely in any other part of the world as in India and China. It was first introduced into this country by Sir William Berkeley of Virginia, in 1647, who received half a bushel of the seed, from which he is said to have raised the first year 16 bushels of excellent rice, and thus the cultivation of it was commenced and carried on. It has been raised to some extent in Virginia ever since, but the amount has been very small compared with that raised in some other southern States, and especially South Carolina, which has produced 75 per cent of the rice crop of all the States. Various accounts are given of its introduction into South Carolina, one of which is that in 1694 a Dutch brig which put into Charleston left about a peck of paddy (which is rice in the husk,) and that Gov Smith distributed it among his friends for cultivation. Another account states that it was introduced into Charleston from Canton, in 1772, by John Bradley Blake. The production of rice in South Carolina rapidly increased, and in 1850 it amounted to 150,930,613 lbs., the production of the whole country the same year being 215,313,097 lbs From these States the cultivation of it extended into others, Georgia ranking next to South Carolina in the amount produced. It is generally supposed that a hot climate and wet soil are essential to its cultivation; but it is raised on high and dry land, and the range of latitude in which it can be successfully cultivated is very wide. Irrigation, however, greatly increases the crop, as does a warm climate; and there is probably no part of the world better adapted to it than the low marshes of South Carolina and Georgia. On account of the extreme unhealthfulness of these regions, it has always been thought that negro labour alone could be employed, the blacks having the same immunity as in Africa from the fever which is deadly to the whites. This opinion is undoubtedly correct, and unless the blacks continue the cultivation of these rice plantations, they will probably run to waste, and the amount of the crop in the country be greatly reduced below that of former years, when there was nothing to interfere with its production. It is needless to say this would be a great calamity, as the rice from South Carolina and Georgia is undoubtedly the finest raised in any part of the world. At the great Industrial Exhibition at London, in 1851, the rice from South Carolina exhibited by E. J. Heriot, received a prize medal and was pronounced by the jury to be "magnificent in size, colour and clearness," and the American was regarded as much the finest in quality of any on exhibition. Its importance as an article of commerce may be inferred from the fact that the amount exported from this country has reached as high as 212,983 tierces in a year.

It may be interesting to some of our readers to have an account of the mode of cultivation adopted on the rice plantations where the overflowing of the land is resorted to. The land selected is that which is above the reach of tide or salt water, and which is not liable to the heavy freshets that flood the country on the upper parts of the rivers, as the irrigation must be completely under control. The land is prepared by the erection of dykes and digging of ditches, and divided into as many separate fields as can be separately attended to, in the various operations required, in a single day, each field capable of being shut off from all the rest. The fields are ploughed in the fall or early winter, and overflowed when the weather is warm. In March the land is drained and kept dry, and when in a proper state to work, it is harrowed or hoed, and trenches for the seed are made 12 or 15 inches apart, and running at right angles to the drains or ditches The seed is sown in the trenches in April, and covered lightly with soil, and then the water is let in upon it through the grates and suffered to stand from four to six days, until the grain begins to swell. The water is let in a second time when the blade is just above the ground, and allowed to remain about the same length of time, when it is thoroughly drained. In about five or six weeks the first hoeing takes place, and a second about ten days later, when the "long water," as it is called, is let on for two weeks, deep for four days and gradually diminishing until it is drained again. When the field becomes dry it is hoed again. On the appearance of a joint it has another hoeing and the "joint water" is put on, which remains until the grain is matured, a period it may be of two months. A few days before cutting, the water is drawn off for the last time. The rice is cut with a sickle, and after threshing another important operation is to be gone through, the removal of the husk or shell, which closely envelopes the kernel, and to which it adheres with great tenacity. This was formerly accomplished by braying it in a morter, and the same course is now pursued to some extent, but mills are constructed in which it is partially ground, without destroying the kernel altogether. The whole is then run through a graduated cylinder sieve, similar to the screens by which coal is assorted, and the hulled rice comes out in three separate parcels or grades, first the flour and fine pieces which have been abraded by milling, then the "middling," and after that the "prime" rice, which consists of kernels nearly or quite whole. The prime rice is subjected to still another process, which is called polishing or brushing, and which is effected by running it through a rapidly revolving wire screen, lined in part with shreds of sheepskin. This removes the flour adhering to the surface of the kernels, and the rice is then ready for market. The prime rice is the rice of commerce. The other portions are reserved for home consumption.

The chemical properties of rice adapt it much more for use in warm than in cold climates. It has a great amount of starch and gluten in its composition, and very little oil, so that its flesh-producing quality is limited. Whether from the knowledge of its chemical properties or as the result of long experience, it has come into very extensive use in the warmest regions of the globe, as in India for instance, where the heat is most intense and long continued. It has always been in much more general use in the Southern States of our own country than at the North, but it is an article of extensive consumption in all the States, and we think it might be still more largely used with great advantage to the general health, especially during the summer season.

The Potato Disease.

THE *Irish Farmers' Gazette* says on this subject:

"During the present prevalence of the potato disease in some parts of Ireland, where Peruvian guano and other ammoniacal stimulating manures are so universally used in the cultivation of this plant, most particularly would we desire to draw the attention of our readers to the following statement of Baron Liebig. Oftentimes, through the columns of the *Gazette* have we directed our readers, previous to the putting in of the potato crop, to substitute the use of the Phospho-guano or other manures rich in phosphates for the indiscriminate use of the Peruvian or highly ammoniacal guano. Year after year have we the sad experience of the potato disease to record. Liebig tells us plainly what should be done to *alleviate* the disease, and field practice has most universally and decidedly endorsed his statement in proof that *phosphates* and *potash*, not *ammonia*, are the elements the potato requires, and must have, in order to effect its healthy and vigorous development, thus providing the plant with the power, in a great measure, to withstand the climatic influence which, in its weak state, it so easily and readily falls a prey to. The statistics of this year will shew that the increased use of strong ammoniacal manures for the culture of the potato is accompanied with increased experience of the disease.

"Though we cannot over-estimate the value of well-saved farm-yard manure for special and judicious application, we think that its *sole* use for the cultivation of the potato is much to be deplored; its proportion of *phosphates* must be increased if profitable results are to be looked for in the potato crop.—Ere another season passes over our heads we earnestly trust that the cultivators of the potato will seek to apply to the land intended for its growth those elements *necessary* and *essential* to its healthy and vigorous development. If the indiscriminate use of ammoniacal manures be continued in potato culture, it will most assuredly be accompanied with that irregular and weak expansion of tissue, at the expense of the quality and strength of vital sap necessary to enable it to withstand the climatic influence yearly brought to bear upon it. As in the case of animal life, so is it in vegetable life—constitutional weakness will be the result in either case if fed upon over-stimulating food."

ADDRESS OF M. JUSTUS BARON VON LIEBIG TO THE ACADEMY OF SCIENCES AT MUNICH.

"During last year, experiments relative to the establishment of laws on the nutrition of plants have been pursued, in the Institute of Physiology of Plants, under direction of Professor Nægeli and Dr. Zœller. These experiments were made upon the potato, as the plant most important for food after the cereals (corn). Three fields were prepared for experimenting on; the first—composed of mould (pulverised peat) from the turf beds of Kolb; the second, of the same soil, mixed with ammoniacal salts, as the principal agent in animal manure; and the third of the same mould, to which was added the fixed elements constituting the ashes of the potato. An equal number of tubers of the same kind were planted in each field.

"Without detailing the various stages of development, I will confine myself to calling attention to the differences between the crops. That from the land manured with the ammoniacal salts was 20 per cent. larger than that of the field No. 1, which had received no addition; but that of the third field (which had the manure of phosphate of lime and of potash) was nearly triple. The proportion of the three crops ran thus—100, 120 and 285. The quantity of potatoes gathered on field No. 3, to which had been furnished the elements composing the ashes of the plant, was 282 hundredweight to each workman, —nearly double the crop given by the best arable land.

"The results so very different of the three experiments can only be attributed to the different composition of the land of the three fields, all other conditions being identically alike. In the two first, a number of circumstances were to produce in the subterranean organs as many organic substances (or tubercules) as in the third; or rather, which is the same, to take from the air a sum equal to their constituent elements.

"These indications, although important enough in themselves, are nevertheless not the most remarkable results of these experiments; for here is the precious information they give us: All the potatoes gathered from the two fields which, by the composition of their soil, presented the elements necessary for the development of the plants only in insufficient quantity, or in false proportions, were the prey of disease. From the shaws, which became black, decomposition spread, and at the end of a few weeks had thoroughly gone through the interior. In opposition, the potatoes in the third field, manured with the fixed elements of the plant, are now (Dec. 1) perfectly sound, in not one is seen traces of the ravages commonly attributed to the *oidium*. Hence, from these observations we see that undoubtedly the conditions favourable to the normal development of plants are also those which prevent disease, and that in consequence the first cause of the disastrous epidemic should be sought in the land. If the land present in sufficient quantity the elements indispensable to organic life, or the growth of the plant, the latter receives the power of opposing resistance great enough to paralyse completely all hurtful influences which can affect it from outside.

"These facts throw the greatest light on the diseases of vegetables in general, and on that of the vine in particular. Oh, that man would remember that the land which has furnished him with the most important elements of his body expects to be cared for by him with discernment and solicitude! Only on this condition can the nature and existence of his descendants be assured. The consequence of the infraction of this great law will fall in divers ways on their children and their descendants to the thousandth generation."

Irrigation of Pasture Land.

For several years, Mr. Isaac Brown, 50 Dick Place, Grange, Edinburgh, has been endeavouring to convince farmers of the good results upon grass crops of irrigation by pure water. On Thursday afternoon he exhibited his system of distributing water over the land in a small field adjoining his house. Among the agriculturists present were Mr. Robert Binnie, Seton Mains, East Lothian; Mr. Milne, Niddry Mains; Mr. Curror, Myreside; Mr. Hutchison, Kirkcaldy; Mr Suttie, C. E. to the Lands' Improvement Company, &c. The general opinion appeared to be that Brown's plan was superior to that of any other previously introduced. It consists of a series of leaden pipes, placed 14 yards apart, from which the water escapes in small jets at various angles, and falls on the ground in the form of a gentle shower. The distance between the pipes requires, of course, to be regulated by the amount of water pressure. As showing the advantage of Mr, Brown's method, it may be mentioned that in 1860, on permanent grass land, with water from the river Eden, in Cumberland, seven crops were cut from the first of May to the first week in October—each crop averaging 1,000 stones per acre, or equivalent to about eleven tons of dry hay for the seven cuttings. Next year, from the last week in April to the second week in September, six cuttings were taken, averaging 1,000 stones each per acre, or equivalent to more than nine tons of dry hay for the six cuttings. A light dressing of a mixture of super-phosphate of lime, nitrate of soda, and sulphate of ammonia, was given to every second crop, and had the effect, with such a supply of moisture, of maintaining the growth from the beginning to the end of the season, although the heat in both years was much below an average. In these cases the pipes were laid at a distance of 15 yards apart, and having a pressure of 70 feet of water, throw a regular shower over the whole ground. At Battersea, in 1862, with a pressure of from 150 to 250 feet of water, obtained from the water-works, the pipes were laid 20 yards apart, and the ground was most effectually moistened. The present crop at Grange is the third which has been grown upon the ground this season. The land was sown with Italian ryegrass on the 15th May, and a crop, 2 feet in height, was cut on the 20th of June. In 21 days afterwards a crop of the same height was cut, each crop giving five tons of Italian ryegrass per acre, which was sold at 20s, a ton. The third crop of grass will be ready for cutting on Saturday first. Future crops, it is supposed, will be better than those previously cut; as, the seed having been only sown in May, the plant is not yet developed for full bearing, and it is estimated that as yet only two-thirds of the ground is properly covered with plants. Cutting every three weeks from the first of April to the middle of October will give eight crops. Thus 40 tons of Italian ryegrass may be safely calculated on, and with artificial manure given to every alternate crop, the expense would not be over £5 per acre in the year. To cow-feeders and others, ryegrass is worth more than £1 per ton, and Mr. Brown estimates that by his system the price of cultivation would not be above 4s. 6d. to 5s. a ton after the pipes are laid down—the entire cost of laying, with interest on plant, fuel, &c., being under £20 an acre. Granting money on the land drainage system, interest at 6½ per cent., it is calculated that the profit on the growth of Italian ryegrass for the production of milk in the vicinity of large towns would be from £20 to £30 an acre. The first cost of pipes will amount to from £12 to £15 per acre, which no doubt seems a large sum, but as the difference between the new and the old material is comparatively trifling, irrigators on Mr. Brown's method can, if "the worst should come to the worst," which is not at all likely, at any time sell the old pipes for within £3 or £4 of their original cost.—*Scottish Farmer.*

Henry Ward Beecher's Farm.

This farm is at Peekskaal, Westchester County, New York, about two miles from the railroad station. It contains forty acres of excellent land, and is pleasantly situated with a southern aspect, commanding an extensive and most charming panoramic view of the Hudson river, the high and surrounding mountains, such as no one knows better how to appreciate and enjoy than the rural loving owner himself.

When Mr. Beecher purchased the place, a few years ago, there was scarcely a fruit tree of any value upon it. Now there are twenty-five hundred choice fruit trees, most of them already beginning to bear. He has erected a large model barn, but as yet occupies the humble cottage he found upon the place, though he has made important additions and improvements.

Mr. Beecher is converting the place, to a great extent, excepting a extensive lawn in front of the house, into a fruit and vegetable farm. He has nearly an acre filled with Delaware and Iona grape vines. And as the trees are yet small, he has raised among them this year between seven and eight hundred barrels of onions.

Around his little cottage Flora reigns in all her glory. There is the greatest profusion of all the choicest flowers, and the whole air is redolent with their sweet and mingled perfumes.

The barn and out-buildings are well stocked with fine horses, oxen, choice breeding cows, swine, fowls, etc. This autumn, Mr. Beecher has been making many improvements in the drainage of his lands and the avenue to his house; all adding greatly to the value and attractiveness of the place.

The influence of a farm conducted like this, though all farmers may not be able to adopt all the improvements that have been there made, must be of the greatest benefit to the agricultural interests of any community. And Mr. Beecher is really a benefactor to all the farming as well as religious interests of the country.—*Correspondence of the Boston Traveller.*

Exterminating Charlock, or Field Mustard.

(*Sinapis arvensis.*)

We know of no weed in the grain-growing districts of New York, that is so difficult to exterminate as this. Canada thistles, daisies and dock, can be eradicated with facility, compared with this. Field mustard is an annual plant, having leaves like the turnip, and bright yellow flowers. It starts from the seed at any time between early spring and late autumn. The plants grow rapidly, and produce a large number of seeds in a short time. In ordinary seasons, two crops will mature on the same field, but winter kills every plant. The seeds will remain in the ground a life time, without losing their vitality. We have cultivated a field of sixteen successive seasons, allowing no mustard to go to seed; but deep ploughing brought seed to the surface the seventeenth year, so that the ground was nearly covered with the young plants.

When wheat, rye, barley, oats, flax, and such crops are raised, if there is mustard seed in the soil, it will appear, and will ripen its seed before the crops. Much of the seed will shell out while the grain is being harvested. If it should not be covered with earth sufficiently deep to promote vegetation, it will remain until the next season, or until the moisture and heat happen to be just right to cause germination.

There are two things indispensably necessary to exterminate mustard. One is to allow no seed to mature; and the other is to cultivate such crops as will induce all the seed to vegetate, that the plants may be destroyed before they go to seed. Grain having mustard seed among it, should never be fed to stock until after it is ground into meal.

When mustard comes up very thick, harrow the ground thoroughly, as soon as the crop of grain has been removed. After a few weeks have elapsed, harrow it again. This will destroy most of the young plants in the seed leaf. After this, use a cultivator instead of a harrow. These repeated scarifyings will cover the seed and bring others near the surface so that a large proportion will vegetate and die before winter. The next season harrow the ground early in the spring so as to start a new crop of the seed. Plough it soon after the time for planting Indian corn. Harrow again in about two weeks. After another fortnight, plough and sow buckwheat. As soon as the buckwheat is harvested, harrow the ground again. The next season manure well, and raise a hoed crop; and allow no mustard to go seed. Next sow a crop of winter grain. The mustard may now appear quite thick. But none of it will have time to ripen before winter, when every plant will die. A limited number of plants will appear the next season among the standing grain. When they are in full blossom, let every one be pulled. A careful, faithful man will be able to pull all the mustard in a day that will appear on several acres, after the soil has been treated in the manner recommended. After this any kind of grain may be raised. But for more than twenty years, mustard will come up every season, and must be pulled up before it ripens. This is the only way that our cultivable fields can be rid of this pestiferous plant. Incessant vigilance from year to year will exterminate it effectually.—*American Agriculturist.*

Odds and Ends of Farming Facts.

FROM THE MARK LANE EXPRESS.

The fact seems frequently to be overlooked that weeds do more than merely occupy the space of land which might otherwise be profitably cultivated: they exhaust the soil *almost* as much as the valuable crops. We say "almost;" for, in the absence of direct experiments upon the point, we only conjecture it; but we may say that the conjecture is well founded. So far as analyses have been carried out, Professor Buckman shows that field-weeds carry off from the soil an abundant supply of alkalies and phosphates.

The extirpation of weeds in pasture-land is best brought about by continual mowing down of their leaves. Let the "fact" be always borne in mind, as the great authority on weeds says, "As the leaves are the lungs of the plant, never in such cases allow the lungs to develop themselves."

A steep for seed-wheat is thus given in a contemporary journal: "Mix one pound of chloride of lime with one gallon of water; after which, let it stand to settle for a short time, and draw off the clear solution. In this, steep the seed-wheat for two hours; then drain, and dry with a sufficient quantity of sand and ashes."

The proportion of husk of the bean in pod to the seed is 14 to 86. The average weight of a bean may be taken at 12 grains, and 580.30 to the pound.

The straw per acre of the wheat crop amounts to, on an average, from 3,000lb. to 3,600lb.; of the oat, 2,700lb. to 3,500lb.; of the barley, 2,100lb. to 2,500lb.; of the rye, 4,000lb. to 5,000lb.; of the bean, 2,700lb. to 3,200lb.; of the pea, 2,700lb.

The following are average gross crops of the seed-producing plants of the farm. Wheat, 25 to 30 bushels; oats, 40 to 60 bushels; barley, 35 to 40 bushels; rye, 25 to 30 bushels, beans, 25 to 30 bushels; peas, 25 bushels.

The following has been recommended as a manure for the turnip crop: Two cwt. of superphosphate, one cwt. of bonedust, half-cwt. of guano.

The kohl-rabi—erroneously termed the "turnip-rooted cabbage"—is held in high esteem by some feeders. Mr. Baldwin, who has experimented on the plant, states, however, that, as a milk-producing plant, he has not found it to be so valuable as some have stated it to be. The true name for it is the *Brassica rapo-brassica*. One great advantage the root undoubtedly possesses is, its power to resist severe frosts. We have had crops of it cut in the severest winter we can recollect; and we found them, after long exposure, as sound as could be. We do not, however, recommend them to be given to the cows in a raw, cold state: they are better cooked.

The kohl-rabi requires heavy manuring: 25 tons of dung to the acre is the least which should be given, and to this should be added 6 cwt. of superphosphate and 2 cwt. of common salt. Like all the cruciferous plants, the kohl rabi requires this last constituent; it is essentially a marine plant. The best crops are grown from transplanted plants: 8 ounces of seed will raise plants enough to stock an acre. The field should be prepared the same as for turnips, in drills, with 27-inch intervals. The plants should be dibbled on the summit of the ridge of the drills from 9 to 12 inches apart. The plants should be transplanted in May, June, and up to the end of July. The seed in the seed-bed should be sown for these transplantings respectively in March (beginning), second week in April, and first week of June.

Stockhardt estimates the amount of nitrogen taken by the hay crop per acre at 69.77, equal to 129¼ lbs. of ammonia; Liebig at 56, equal to 104 lbs. of ammonia; and Boursingault at 64½, equal to 119½ lbs. of ammonia.

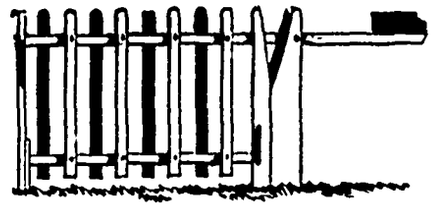
The following analysis of the ash of turnips is by Boursingault. Potash 41·96, soda 5·09, lime 13·60, magnesia 5 34, phosphoric acid 7 58, oxide of iron 1 28, sulphuric acid 13 60, chlorine 11·60, silicia 7·95.

In making superphosphate, Dr. Anderson recommends the following proportion of the ingredients: One ton of inch-size bones (that is, bones broken to such a size as to allow them to pass easily through a ring one inch in diameter), ¼ ton of sulphuric acid, 60 gallons (or ¼ ton of boiling water). The following is the way of making it: The cistern should be made by preference of lead, or strong wood, and a watering vessel of lead. The bones should be spread in small quantity upon the bottom of the cistern, and the acid gradually poured in upon them from the watering vessel, and at the same time a quantity (proportionate to the acid) of the boiling water.

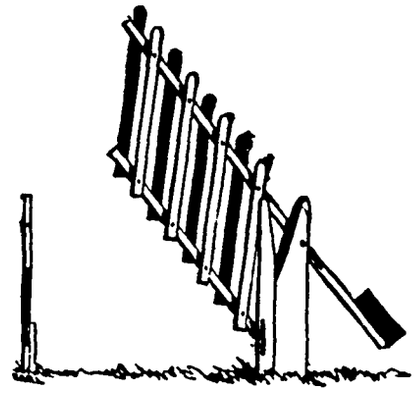
In dibling wheat, experience has shown a good distance between the rows to be 9 inches apart, and the holes 9 inches in the rows, thus making a series of 9 inches square. We have found 12 inches square to give the best results, although we have seen it stated that 6 inches square are the best. This, we should say, is too small. The depth of the holes should not exceed, nor be each less than 2 inches. The number of grains to put into each hole has been disputed: certainly the minimum is two, but three is a usual number. At 5 inch distance a good dibbler should with three droppers get over half an acre per day.

An Excellent Gate.

AMONG a number of styles of fences and gates on exhibition at the New York State Fair, in September last, we were particularly pleased with a newly invented gate, of which we now propose to give our readers a brief description, with accompanying cuts. This gate consists of an upper and lower bar, with pickets put on at right angles with the bars. The cut at the top of next column, shows the appearance of the gate when it is shut, and it will be observed that the upper bar is considerably longer than the lower one, having on the projecting end of it a box which is filled with sand or gravel, to operate somewhat on the plan of the old-fashioned well sweeps, and the rough gates you sometimes see pivoted by means of a pin on the top of the post. This gate opens by virtue of the way in which the pickets

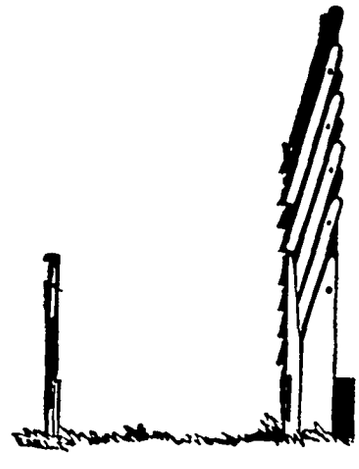


are put on. They are fastened with screws, which, by means of boring and rimming the pickets, fit them very loosely, while they are tightly driven unto the bars. The gate is hung upon a three-quarter iron bolt, the head of which is plainly shown in the cuts, and which goes through the top bar. An oak pin through the bottom bar works up and down in a slot which is also shown in the cuts. On lifting the free end of the gate, the pickets easily slide in the manner seen in the second illustration, which represents the gate in the act of opening.



The pickets continue to close upon each other, somewhat after the manner of a lady's fan, until the gate attains the perpendicular, when the whole thing is tightly brought together, and presents the appearance shown in the third cut.

The posts may be as usual of cedar or oak logs, the one on which the gate hangs being flattened to receive the outer plank. Or the post may have a four inch space cut in the top, and the slit may be formed by nailing strips on the inside of the post for the pin to work in; or the post may consist simply of two upright planks, as shown in the cuts.



We consider this, on the whole, the best farm gate we know of. It is easily constructed, so much so that any farmer can make it for himself. It is light, and yet strong; properly put together, it is not liable to get out of order. It can never be left half open, and is not, therefore, liable to damage by the carelessness of teamsters. It must either be entirely shut or entirely open. The chronic difficulty with gates, viz: trouble with the hinges, is avoided on this principle. Finally, it is an excellent winter gate, as it can neither be blocked up, nor racked by attempts to draw it over an accumulation of ice and snow.

The Breeder and Grazier.

"Infiltration" of Meats.

SEVERAL experiments in the comparatively new process of infiltrating meats so as to preserve them for food, were made last week at a packing establishment, in New York, in the presence of a considerable number of persons who had been invited to witness them. Among the number were Drs. Sayres, Crane and White, besides several well-known men in the provision trade. The experiments were made under the direction of Dr. Courtney Attwood.

The process was invented by Prof. John Morgan, of the Royal College of Surgeons in Ireland, and a full description of it was prepared by him and published in the Journal of the Society of Arts. Liebig declares that the process is founded on correct scientific principles, besides being simple, rapid and economical; and he makes some important suggestions in regard to the care of the meat after it has been treated or "cured."

The process requires the proper slaughtering of the animal by a blow on the head. The chest is then opened to expose the heart, which is immediately pierced on the right side for the discharge of the blood. The carcass is then ready for operating; and the process is analagous to that of injecting a cadaver for the purpose of dissection.

A pipe is introduced into the left ventricle of the heart, passing into the aorta or great artery, where it is firmly fastened with a cord and noose. The pipe is then connected by a coupling with a stop-cock fixed to a flexible tube, to a tank filled with brine. This brine enters the great artery, traverses all the arteries and capillaries, and passing into the veins, issues from the incision in the right side of the heart. This thoroughly frees the blood vessels from the blood and lymph which would interfere with the preservation of the muscle. From five to twenty seconds only are required for this operation.

The incision on the right side of the heart is then closed. The fluid used—ordinary brine or any similar substance—is injected into the arteries, to make the circuit through the capillaries and into the veins, thoroughly distending all the vessels. Every tissue of the body is thus saturated.

After about forty minutes the carcass is to be cut into pieces of suitable size, and pressed or hung up to dry in a room having a good current of air. A well ventilated chimney is a very proper place for the purpose.

The addition of certain substances to the fluid employed has been suggested, as sugar, small quantities of phosphoric acid, (to coagulate the albumen and prevent scurvy,) spices, &c. "Pickle" and saltpetre, or nitrate of soda, are all that are really required; but the additions improve the meat.

A Plea for Pork.

IT is getting to be the fashion among a certain class of people to decry the use of pork, as being unwholesome. It would seem that the use of it for centuries among civilized nations, as animal food, must establish the fact that it is not injurious to the health of man. It is too late in the day to commence a crusade against pork. Some few whose tastes have become vitiated by luxuriant living, may, perhaps, be permitted to declaim against the use of swine's flesh; but men of temperate habits, engaged in the laborious occupations of life, know from experience that the use of pork and hams is conducive to the health and strength of the body. It is to be borne in mind, that the varieties of animal food obtained in any given place are few. If pork were to be discarded from the table, beef and mutton would then be the principal animal food, and it is manifest that in very populous countries, the supply would not be equal to the demand. The common people especially would be deprived of an important part of the food, now deemed essential to their living. Take away from them the pork which now they fry or boil, the hams which they justly value, and the lard which every cooking establishment must have and use, and what a deprivation every cook at once experiences. Butter might be used in many cases instead of lard; but the latter is an essential ingredient in the dough nut, which we all of us prize so highly. You discard pork, and you must discard *lard*; and this you cannot do, without greatly curtailing the means of comfortable living. Among the good gifts of Providence to large numbers of our race we certainly may consider swine to be one of them.

The objection to the use of pork, that its tendency is to produce *scrofula*, is of no weight, because it is a mere assumption without proof. It is taking a thing for granted that is denied by the community in gene-

ral. It must be admitted that the class of farmers who largely use pork, are as healthy and as free from scrofula as any other class. The American people of the rural districts are not tainted, or affected by scrofula. If you will inquire within the circle of your acquaintance, you will find this to be a fact. But consider how large an income the farmer derives from raising and selling his pork—how extensive is the commerce in this branch of business. Go, for instance, to Cincinnati or Chicago, and visit the slaughter houses and pork establishments, and you will be astonished at the extent to which the pork business is carried.

In conclusion, we are forced to say, that instead of wishing the quantity of pork to be diminished in our country, we would rather wish that it might be greatly increased; for no other kind of animal food can be its substitute and meet the wants of the community.—*Iowa Homestead.*

Farm Stock.

THE raising and care of stock demands the attention of every farmer. The manner in which he performs this part of his labour, is a very true criterion by which to judge of his merits and success as a farmer. The man who keeps a lot of lean, hungry looking cattle, is *not* the man to stand high as a farmer, nor to find farming very profitable in the long run. Far too little attention is paid to the choice of stock. Very many farmers, because they can get a little more money from the butcher for a nice calf than for a common one, sell the best and raise the other. But this course, except for a very short time, is far from being profitable. It is a law of nature that "like produces like," and from this law there are few deviations. Now, the farmer who raises an inferior calf, not only makes sure of one inferior animal, but all the descendants of that animal will be a low grade. This is an item worthy of consideration. The difference in the value of a good and an inferior cow, for the purpose of raising stock, is very much greater than the difference in the price. Feeding is an important part of the care of stock. The best breeds of animals, unless *well fed*, will be of little profit. Many farmers seem to think that the greater the number of cattle they can keep on a given quantity of hay, the more profitable it will be. But this is a mistake. The old maxim, "anything that is worth doing at all is worth doing well," is eminently true of feeding stock. It is cruel and unprofitable to keep an animal so short for food as to have it grow poor. Cruel, because nearly all the comfort and happiness of animals consist in gratifying the appetite. Unprofitable, because they are losing flesh, when by a more liberal feeding, they would be gaining in flesh and value. Some farmers sell their best hay and feed their poorest, and seem to think they are on the high road to wealth. They *are* on the road; but they are moving backwards. Good cattle can no more be raised on poor hay than a good house can be built with shaky boards. In either case there is an utter impossibility, because the materials used are not of the right description. Good breeds, good care, and last, but not least, good feed, are the three principal, essential elements of success in this department of farming.—*Cor. Rural American.*

FEEDING PEAS.—When peas are to be fed to swine without threshing, those who practice feeding them prefer putting in large stacks. Then, those that are wet by rains can be fed out before they have been injured. If designed for sheep next winter, it is better to house them, or put them in long and narrow stacks, and cover with a lean-to roof of boards.

BLEEDING HOGS.—A recent writer says: "Bleeding is a remedy for most of the diseases to which a hog is liable, and one of the best places to bleed a hog is in the roof of the mouth." He objects to bleeding from the artery inside the fore-arm just above the knee, because it is more difficult to stop the flow of blood there than in the roof of the mouth. In the latter place it is stopped by applying a cloth well saturated with cold water.

A NEW DODGE FOR GETTING OVER A DIFFICULTY.—Riding a high-couraged mare the other evening up a narrow lane, I met a threshing machine coming smoking along towards me. Of course, when within fifty yards, there was a sudden bolt round. One of the men came forward to lead the mare past, but she reared up, and would go no nearer; the other then came up and said, "Let me have her, sir, and I'll warrant she'll go, for I never saw one that I couldn't get by yet." I then got off the mare—for there was barely room for her to pass between the machine and the hedge—and he began rubbing her nose with his oily hands, when he took her by the rein, and led her by the machine, without further trouble.—*Communication in The Field.*

CHARCOAL FOR SWINE.—Give your swine charcoal. Its nutritive qualities are such, that they subsist on it for weeks together without other food. Geese, when confined so as to deprive them of motion, and fattened on the grains of corn, become fat in eight days. Hogs eat it voraciously after a little time, and are never sick while they have a good supply. It should be always kept in the sty, and fed to the inmates regularly like all other food.—*Iowa Homestead.*

HOW A HOG SWEATS.—Not like a horse or a man, but through his forelegs. There is a spot on each leg, just below the knee, in the form of a sieve. Through this the sweat passes off. And it is necessary that this is kept open. If it gets closed, as is sometimes the case, the hog will get sick; he will appear stiff and cramped—and unless he gets relief it will go hard with him. To cure him, simply open the pores. This is done by rubbing the spot with a corn-cob, and washing with warm water.—*Rural World.*

"KEEP A PIG AND A COW."—Good advice where one has a fancy for pigs, but I confess I have no such fancy, and so far as a pecuniary gain my experience has been against rather than for the pig. For some years I kept pigs, feeding on weeds, sour milk, slops, etc., until the time of sweet apples, then fattening on apples, and ripening off with corn, but I found the money paid for my pigs, and the value of my apples and corn, at twenty-five cents a bushel, amounted to more than my pork would sell for when taken to market. I now practice a compost heap of my weeds moistened with slops, using occasionally a sprinkling of salt, and plaster paris (gypsum.) I prefer it to the pig practice.

The cow is indispensable to comfort in the country, and a great deal might be advanced in her favour.—Aside from daily usefulness there is additional beauty added to every scene by some addition of active life in the landscape.—*Cor. Gardener's Monthly.*

CLEAN PIGS AND DIRTY PIGS.—Pigs enjoy the reputation of having a real liking for dirt; and, certainly, the way in which they are kept on some farms would show that their owners are determined to give them ample opportunities for carrying out this liking. No notion can, however, be more erroneous than this, as none is certainly so productive of loss to the keeper. Let any one not convinced of this try the two modes of pig-keeping—the dirty and the clean—the food in both cases, and other general treatment, being the same; and the result will show him which of the two is best in the end. A great deal depends upon the mode in which they are housed. Mr. Raines, of Mills, adopts the following:—A large out-house is enclosed at the sides, so as to be warm and dry. The floor is paved, and sprinkled over with burnt clay, and ashes obtained by burning weeds. In this the pigs are fed; while for resting and sleeping they have a compartment railed off at the other end, and which is amply provided with clean straw. In another case, the principle of box feeding has been applied, the pigs being kept in a pit, into which the manure from the ox or cow stables and the horse stables is put. The pigs tread this down, and enjoy themselves amazingly. In one case, where this plan has been adopted, the farmer states that his pigs "have given him a profit by their meat, and left the dung—as good as guano—for nothing."—*Scottish Farmer.*

SHORTHORN CATTLE IN FRANCE.—The *Journal d' Agriculture Pratique* has an engraving of Ben, a pure Durham bull, which carried off the prize for young bulls at the district show in Evreux in 1864. M. de Grosourdy de Saint-Pierre, the late owner of Ben, writes: "He was born at La Vente, in the commune of Silly-en-Gouffern, in the Orne, December 25, 1862. He has been sold to M. Paul de Dannes, at Angers. His father is Balzac; his mother, Dogberry, by Dapple; his grandmother Cendrillon, by Gambol; his second grandmother, Marinette, by Morning Star, &c. Cendrillon, the grandmother of Ben, was a very good milker; she gives four kilogrammes of butter (a kilogramme is the fiftieth part of an English cwt.) per week, and maintained her milk up to the period of calving. I cannot say anything as to the offspring of this bull; but I can testify that the best Durham blood runs in his veins. It is sufficient to name to you the most perfect bulls of the Pin, such as Verax, Tinker, Duchesne, and Baltic. I began to form a herd in 184 , and I have endeavored to select bulls obtained from milking cows. Being a neighbor of the Pin *vacheries*, I often assist at sales, and by this means I am enabled to recognize the best milkers. Thus I have constantly 30 to 34 animals of the pure Durham breed, among which I count 10 to 12 cows or heifers with their first calf. All my cows give about 7- kilogrammes of butter per cow per annum.

The Dairy.

Widow Jones' Cow.

MR WELD, editor of the New York *Despatch*, tells the following story:

"Widower Smith's waggon stopped one morning before widow Jones' door and gave the usual signal that he wanted somebody in the house, by dropping the reins, and sitting double, with his elbows on his knees. Out tripped the widow, lively as a cricket, with a tremendous black ribbon on her snow-white cap. Good morning was soon said on both sides, and the widow waited for what was further to be said.

"Well, ma'am Jones; perhaps you don't want to sell one of your cows, no how, for nothin', no way, do you?"

"Well, there, Mister Smith, you couldn't have spoken my mind better.—A poor, lone woman like me, does not know what to do with so many creatures, and I should be glad to trade, if we can fix it."

So they adjourned to the meadow.—Farmer Smith looked at Roan—then at the widow, then at Brindle—then at the widow—at the Downing cow—then at the widow again—and so on through the whole forty. The same call was made every day for a week, but farmer Smith could not decide which cow he wanted. At length, on Saturday, when widow Jones was in a hurry to get through her baking for Sunday—and had ever so much to do in the house, as all farmer's wives and widows have on Saturday, she was a little impatient. Farmer Smith was as irresolute as ever.

"That Downing cow is a pretty fair creature—but—" he stopped to glance at the widow's face, and then walked around her—not the widow, but the cow—

"That ere shorthorn Durham is not a bad looking beast, but I don't know—" another look at the widow

"The Downing cow I knew before the late Mr. Jones bought her." Here he sighed at the allusion to the late Mr. Jones. She sighed, and they both looked at each other. It was a highly interesting moment.

"Old Roan is a faithful old milch, and so is Brindle—but I have known better" A long stare succeeded this speech—the pause was getting awkward, and at last Mrs. Jones broke out:

"Law! Mr. Smith, if *I'm* the cow you want, *do say so!*"

The intentions of the widower Smith and the widow Jones were duly published the next day, as is the law and custom in Massachusetts, and as soon as they were "out-published" they were married.

THE HOOF OF A GOOD COW.—A correspondent of the *Rural American* says:—"For a good dairy cow, choose one with a striped hoof; she will never fail. A cow with dark hoofs may be good for a large quantity of milk, but it will not be rich. For a medium cow, choose one with part of the hoof striped, or any other colour except dark."

BOILED POTATOES FOR MILCH COWS.—A successful farmer informs us that he has practiced, the last summer, giving to each of his milch cows five quarts of cold boiled potatoes a day, and that they were worth half a dollar a bushel for this purpose. His old potatoes were worth nothing in the market, and so he boiled up some twenty-five or thirty gallons at a time. He says that he could see no benefit whatever from giving them old potatoes in a raw state. There is a period from the first of July to the first of August when cows need some additional food, and if boiled potatoes will help them hold out their milk till it is time to feed out the Southern corn, we may hope to carry cows through the whole summer season in a condition to yield a good profit, especially on farms remote from the market.—*Me. Farmer.*

SELECTING MILCH COWS.—A correspondent of the N. Y. Farmers' Club, says that Col. Woodman, in the State of Maine, for about forty years has kept a dairy, and generally reared his own cows. He has always found, in his experience, that if a heifer's first calf was a male she never proved to be much of a milker—indeed, that she in subsequent years, never gave more milk than on her first calving.; but if her first product was a heifer, she was sure to represent all the milking qualities of a valuable mother. He did not know how this might be in other experience, but in forty years of his own, he had known of no exception to the rule above indicated. Coming from a man so trustworthy in every respect as I know him to be, I thought I should like to submit it for the consideration of our farmers and stock breeders.

Sheep Husbandry.

Dressing Sheep with Castor Oil.

Mr. James Wilson, 146 George Street, Edinburgh has addressed the following communication on this subject to the *Irish Farmer's Gazette*:

"I think I made a promise last year to you or some of your subscribers that I would let you know the results of my experience in applying castor oil to the autumn dressing of my flock of sheep on my farm of Screggan, near Tullamore. I am glad to say, with one trifling exception, which I will explain, it turned out a great success. Not to speak of the much more comfortable state it kept the sheep in, the extra length and strength—hence weight—of the pile of wool was very considerable; so much so that my clip of wool (numbering nearly the same, and the sheep getting the same keep), which was sold this season at 4½d per lb. under the price of last year, came to more money in the aggregate, which I attribute entirely to the influence of the extra oil I gave. I leave these facts to speak for themselves.

"The 'exception' that I referred to above, was this: I gave my lambs and one-shear sheep a second dressing of the castor oil alone about the end of January, which, no doubt, produced a most extraordinary growth; but it discoloured the wool a little, and left some black ends on it. But for this I might have got from 1½d. to 2d. per lb. more for it. However, I think the additional weight fully covered the reduction in price.

I do not reflect in the least on myself for doing this. I was trying an experiment, and I am now satisfied that I did wrong. I will, therefore, not do it again and I will advise all others against doing it too. I am quite convinced that *one* good autumn dressing is quite sufficient for all good and useful purposes.

As early dressing is very important, I cannot too strongly recommend you to impress upon the flock-owners in Ireland, who have any regard for the comfort of their sheep during winter, and also an eye to having, say, from 10 to 15 per cent. added to their next year's wool account, the great necessity of having their sheep dressed without delay, before the broken weather sets in."

Free Trade in Wool denounced.

THE Editor of the sheep department of the *Rural New Yorker* (Dr. Randall), discourses as follows on protection for American wool: "American farmers, who *live well, and educate their children, and pay Government taxes*, cannot compete in *cheap* wool production with serfs, and demi-savages, and dirt-eaters of other descriptions, in other countries. This fact may as well be distinctly avowed by farmers, and understood by all. *Our wool must have government protection*, in spite of all Utopian free trade theories, or else we must throw their production on other countries, and thus kill our own sheep farmers.

The time has come to turn over a new leaf in these matters. *Protection* must hereafter be a necessity of our commercial polity, or the republic must be buried under its debts, or else resort to the more shameful alternative of repudiation. This *protection* must be honestly and fairly distributed between different interests, the producer sharing its advantages equally with the manufacturer, because he takes on his shoulders an equal proportion of all the burdens of government."

On the above we have two questions to ask:

1. Who are the "serfs, demi-savages, and dirt-eaters," whose competition in the wool market our contemporary wishes to exclude?

2. Has the impossibility of American sheep-farmers to compete with all the world in wool, any connexion with the enormous prices at which their favorite Merinoes are bought and sold?

BRITISH IMPORTS AND EXPORTS OF WOOLS.—An official table for the first eight months of the years named, shows that the quantity of wool imported into Great Britain was:

IMPORTS OF WOOL IN EIGHT MONTHS.

From	1863. Lbs.	1864. Lbs.	1865. Lbs.
Hanse Towns and other parts of Europe	15,902,988	20,538,643	14,318,926
British Possessions in South Africa	9,333,524	10,290,101	14,491,801
British India	11,217,343	7 609 763	9,294,213
Australia	60,233,243	78 029 351	88,034,891
Other countries	15,001,175	13,009,854	11,720,715
Total,	110,783,573	129,477,802	137,860,546

The exports in the same periods were as follows:

	1863.	1864.	1865.
Colonial wool	34,331,365 lbs.	30,962,487 lbs.	46,607,371 lbs.
Foreign wool	8,990,789	4,647,529	6,757,859
English wool	6,839,884	6,906,090	5,489,280

Mutton the Meat for Farmers.

THE cheapest meat for farmers is mutton. It may safely be said it costs nothing. The wool that is annually sheared from the body of every sheep, richly pays for its keeping. Then there is the increase—an item of great importance. The increase is so much clear profit. From this increase, the farmer can get all his meat for the year if he likes. Or he may save the lambs and take some of the older sheep in their places. The pelt of the sheep, if killed, for mutton, is also saved and sold—another credit item.

It is also the most convenient meat to have on hand. In the warmest weather a farmer can take care of one sheep after being killed, without letting it spoil. With beef this is not so easy. One man can kill and dress a sheep in an hour. It takes but little time or trouble to kill a sheep, not near as much as to dress a hog or a beef. On account of convenience and economy, we say keep sheep and live upon mutton.

We have said nothing about its being the healthiest food. This is admitted. It needs no arguments or facts to prove it. It is true that pork is the chief meat of farmers. It is the unhealthiest of all, whether fresh or saturated with salt to preserve it sound.

Let every farmer keep sheep. They are the most profitable stock on a farm. The hog's back only yields bristles, while the sheep's yields downy wool. All that you feed to the hog is gone, unless you kill it, while the sheep will pay you for its keeping with its fleece yearly. The hog is a filthy, voracious animal—the sheep gentle as a dove and neat and cleanly.—*Rural World.*

The Profit and Loss on a Big Merino Fleece.

THE following communication appears in the sheep department of the last *Rural New Yorker*, and will probably raise some commotion among American Merino breeders:

LIMA, N.Y., Oct. 30, 1865.

DEAR SIR,—In buying wool the past season I determined to have the heaviest fleece I bought cleansed, by way of experiment. This proved to be the fleece of the ram "Osceola," owned by Josiah Taft of West Bloomfield, N.Y. It weighed in the dirt 30 lbs. when I bought it. I was informed that it weighed 30½ lbs. when taken from the sheep, but that it had been reduced thus much by giving away samples. I took it to Mr. Mather's mill at Hemlock Lake, and had it worked into yarn, and here is Mr. Mather's statement of results:

MR. MOULTON,—When I took the fleece of Mr. Taft's ram from you it weighed 30 lbs. I cleansed it myself thoroughly, dried it perfectly dry, and obtained from it eight lbs. of well cleansed wool. I worked it into mixed yarn, and had six lbs. of the first quality three-threaded yarn, worth $2.50 per lb. The account with this fleece stands thus:

30 lbs. wool (after one-third shrinkage), at 60 cents.	$10 00
Cost of cleansing and working	4 50
Cr	$14 50
By 6 lbs. yarn at $2.50	15 00
Net gain	0 50

It is proper that I say that Mr Taft had no knowledge that the fleece was to be cleansed separately, until it was done; and that my object was not so much to see how much wool I could get from it, as to ascertain the amount of waste.

Yours, respectfully,
N. MOULTON.

HAVOC AMONG THE SHEEP.—Luke Sweetser of Amherst, had a superior flock of finely bred and selected Southdowns. Year in and year out, he had watched them, culling out those that he could afford to sell without detriment to the lot, till he had got the finest flock of that breed, probably, in that part of the State. It's a sad thing, it's a serious public calamity, to have such a flock broken up, or in any way interfered with. A few nights ago the dogs got among them and killed and maimed some half a dozen. The men determined to watch with loaded guns, but left the sheep in the yard instead of the pasture, and the dogs did not appear. In the morning the sheep were let out again, and in half an hour it was discovered that the was trouble among them. Seizing the guns the men crept out and shot the big dog of a neighbour, but not till after he had killed one and nearly killed six or eight others. Out of a superb flock of thirty-four but seventeen are left. The loss of the others, and the injury to the remainder, was unquestionably greater than all the dogs in the town are worth.—Public sentiment on dogs still needs educating. Why not keep sheep instead?—*Mass. Ploughman.*

Entomology.

The Yellow-necked Apple-tree Caterpillar.

DURING the past season many gardeners and possessors of orchards in Toronto and the neighbourhood, as well as in some other parts of the Province observed with alarm the appearance in great numbers, of strange looking and very voracious caterpillars upon their apple-trees. Their attention was usually first directed to these depredators, by seeing that many branches of their trees were almost entirely stripped of their foliage; and, on looking closely to ascertain the cause, they very soon detected a community of caterpillars, busily engaged in the work of destruction.

These noxious insects, though hitherto rare and seldom noticed in Canada, have been long ago observed in the United States. So early as the year 1773, Mr. Drury, a distinguished entomologist, described and figured the moth into which these caterpillars turn, having collected specimens of it in the State of New York. He named it *Phalæna ministra*, the Handmaiden moth; it is now known by the appellation of *Datana ministra*, Drury. It belongs to the family Notodontidæ, of the order Lepidoptera, most of the members of which are injurious to vegetation. The great peculiarity of this family, and one which is eminently characteristic of the species before us, is the extraordinary posture often assumed by the caterpillars. When at rest after eating, they are usually crowded together as closely as possible upon the twigs where they have been feeding, clinging to them with the four intermediate pairs of legs, and with the extremities of their bodies raised upwards. If touched, or otherwise disturbed, they throw their tails upwards with a jerk, and at the same time bend their heads backward semicircularly, till the two extremities almost meet; in this position they will remain for a considerable time, presenting, as may be imagined, a very odd and grotesque appearance. The accompanying figure will enable the reader to form some conception of this peculiarity.

The eggs from which these caterpillars come forth, are laid in patches of about a hundred together, on the under side of the terminal leaves of a limb, and the young are hatched out about the end of July or beginning of August, sometimes there are other broods later in the season. At first they eat only the parenchyma on the under side of the leaves, the upper side and veins remaining untouched; but as they gradually increase in size and powers of digestion, and consequently of appetite also, they consume the whole of the leaves except the stem and a portion of the mid-rib. Beginning thus with the fresh and tender leaves at the end of the branch, they descend by degrees devouring all before them, till the limb is perfectly bare. Should they not then have attained their full growth, they proceed to another to complete what is lacking, and finally descend to the ground for their transformation into the pupa state. When first hatched out they are less than quarter of an inch in length, tawny yellow, with black heads and feet, and four slender, pale yellow stripes along each side of the body, the whole being thinly clothed with long fine whitish hairs. When full grown, the ground colour of the caterpillar is black, with the pale yellow stripes as at first; the head is black; the second segment, or neck, as it may be called, is yellow and wax-like (hence its ordinary name); the fore-legs or claws are black, while the four pair of intermediate pro-legs are waxy yellow, spotted with black. Its greatest length is about two inches.

The caterpillar state lasts five or six weeks, at the end of which time they usually all descend the tree at night, and entering the ground bury themselves about three or four inches below the surface, there they become transformed into the chrysalis state, and remain till the following summer. This usually occurs in September, but the perfect insect or moth does not come out until the ensuing June or July.

These moths are of a light brown colour; the head and a large rectangular spot on the thorax are deep chesnut brown; the anterior wings are crossed by four transverse lines of a rusty brown colour, the first of which is regularly curved, the remaining three being nearly straight, oblique, and parallel to the exterior margin,—sometimes a fifth line is visible between the two last,—there are also one or two dark brown spots near the middle between the first and second lines, and an oblique streak of the same colour at the tip. The posterior wings are pale yellow, without markings. The antennæ of the males have two rows of fringe along the under side, while those of the female are entirely free. They measure from an inch and three quarters to two inches and a half across the wings. The moths themselves are not very often met with, but are sometimes captured indoors, whither they have been attracted by the lights at night, the open windows at that season of the year affording them a ready means of entrance.

The best mode of preventing the ravages of the caterpillars, is to go round all the apple trees in the garden or orchard, and examine closely wherever the end of a branch appears to be stripped of its leaves. Should this insect be the cause of the destruction, it will be readily found, and the caterpillars can be as easily destroyed, by simply cutting off the twig on which they are clustered and throwing it into the fire. An orchard can thus be effectually cleared of the pest in a very short space of time, and without much labour.

The Tomato-Worm Story.

THE fatuity which the human mind displays in returning to the idea, through successive generations, that whatever object is inexplicable at the moment to its ignorance in the entomological world, is hurtful and will "sting," is distressing to those who believe in the progressive intelligence of the human race.

At the present time there is going the rounds of the country press, the following article, which we give in full:

"TOMATO WORM.—The Port Byron (N. Y.) Times says, that several persons near Auburn have recently been stung by a large worm that infested tomato vines, death ensuing within a few hours. A lady in Port Byron discovered one of these monsters on her tomato vines one day last week, and narrowly escaped being stung. The worm is described as about three inches long, of a green colour and armed with claws and nippers, with a black horn extending in *front* some three-fourths of an inch long. A writer in the Rochester Express states that a few days since he took one of these worms from his tomato vines, and confined it about a week in a glass jar, awaiting its change into a chrysalis state. Upon being released it burrowed its way into the ground nearly a foot, or as far as a thread by which it was held would permit. Under the impression that it might resurrect itself another season in the miller form and become the parent of a numerous and destructive progeny, it was killed."

We have witnessed assemblages of boys armed *with long sticks, engaged in the perilous attempt* of "stirring up" a solitary moth, which rested sleepily on a fence. Ensconced behind some tree or other projecting object, for security, the boys would sally out from this vantage ground and courageously attack the "monster," and we feel sure that these boys, grown up men, will ever retain a recollection of the address that saved them in such perilous enterprises. But what are these dangers to those encountered by the lady who narrowly escaped being stung by the harmless caterpillar of *Sphinx carolina?* And then the deaths; how is it that these never appeared in the obituary notices?

By whom over it was described, the person, with some similarity to Uncle Toby in this respect, evidently did not know the right from the wrong end of a—caterpillar. The grown-up child, who confined the larva of a Sphinx in a glass jar, expecting it in that locality to change into a chrysalis, and who afterwards tied a thread around it while the poor thing was intent on performing its natural transformations appointed by the Almighty, may perhaps be pardoned his ignorance from the circumstance, that he expected the worm would "resurrect itself in the *miller shape,*"—*a reasonable conclusion, and one* which we never had expected from his conduct, the latter leading us rather to anticipate, that he believed the poor thread-tied worm would transform itself into a venemous reptile, or full-fledged griffin. The "claws" and "nippers" indeed seem to favour the supposition that such a transformation might be expected, on the scriptural authority that the "last state" shall be "worse than the first." Seriously speaking, need we state that the "worm" is the caterpillar of *Sphinx carolina*, a lepidopterous insect, incapable of inflicting harm on any one, except by devouring a few cleemosynary leaves of the plant from which it derives its sustenance; that the "horn" is situate posteriorly on the "tail" segments, and not "in front;" that it undergoes its transformation into the chrysalis state underground, and emerges the following spring as a "moth"? Truly, when we read this article, we thought the world could ill dispense with an Entomological Society, were it only to free it from imaginary fears and dangers.—*Practical Entomologist.*

☞ Dr. Fitch describes a large yellowish hairy fly that devours honey bees, catching them on the wing and eating out their entrails. One will kill hundreds of bees in a day, and it is not affected by stings, nor even poison, such as prussiate of potash. In some sections this insect depopulates hives.

ANTS.—A short time ago we gave a plan for getting rid of ants "oaches, etc. Here is another simpler method. Daub a piece of thick brown paper with molasses, and then sprinkle with arsenic. Distribute along your closets, bins, drawers, etc., and in three or four days you will find that they have all disappeared.

DO BUTTERFLIES FEED ON FRUIT?—Being an invalid for some weeks past, I have, amongst other ways of killing time, placed a decayed pear on my window sill, and amused myself by watching the habits of a variety of the insect tribe. I have been much astonished now, for three days, at the constant attendance of three or four large butterflies. Though vigorously attacked by the wasps, they find no difficulty in utterly routing a crowd of insects, including wasps, bees, humble bees, and blue-bottle flies. One stroke of their large wings clears the whole surface of the bruised pear. These fine and gorgeous butterflies have only four legs (my encyclopædia says butterflies have six), two long horns tufted at the end, and *a long antenna springing from the centre of the* throat, which is curled up like the spring of a watch, when not in use. This antenna they insert into the soundest part of the pear, apparently extracting the juice. The butterflies frequently fight, rising high into the air.—AMOSTO.—[Butterflies very commonly alight on ripe pears and plums, and imbibe their juices with great apparent gusto. Instead of horns our correspondent should have written *antennæ*, and instead of antenna, *trunk.*—ED.]—*Field.*

Veterinary Department.

Diseases of the Hock Joint.

BOG-SPAVIN.

THE hock joint is the great lever by which the body is propelled; and as a matter of course it must be exposed to more wear and tear than any other joint. Hence we find it subject to conditions identical to those in which windgalls are caused. This is known by the name of bog-spavin, or by some people called blood-spavin, because they believe the tumour to consist in a collection of blood. This is not the case, as bog-spavin and blood-spavin are separate affections. However, the formation of the latter is always dependant on the existance of the former. The vein passing over the hock, lies on the seat of bog-spavin; and when the bruise becomes distended it causes a certain amount of pressure on the vein, thus impeding the flow of blood, and resulting in a permanent dilitation of the walls of the vessel.

Blood-spavin, therefore, consists in distension of the vein; while bog-spavin is an increased secretion of synovia in the hock joint. As these affections are of the same origin, and must be similarly treated, we will only notice the latter. When bog-spavin occurs in young horses, recently put to work, it may be removed; but in old horses it is seldom treated with success, as the disease is often associated with rubbing of the articular cartilages, causing the synovial processes to become inflamed, and thus leading to a disease of a more acute and hardened character. In those cases it is almost impossible to remove the tumour. Bog-spavin is most common in young horses, which are put too early to work. At the same time, animals with badly formed, small hocks are most subject to it, because in the formation of such animals there is manifestly a want of wearing surface. Hence, if the animal is put to any great exertion, an increase of synovia takes place, to supply the wants of undue friction, until the joint becomes so filled with this albuminous fluid, that the absorbents are inadequate to take up the over-abundant quantity, and a bog-spavin is the result. Suppose at this stage no attention is paid to the disease, and the animal is kept continually at hard work, the secretion becomes augmented, and in order to promote those secretions, a greater amount of blood is sent to the synovial membranes, which of course becomes congested, and as a consequence inflammation sets in, and the animal goes lame. Lymph *is exuded into the joint*, and the cartilages become upbraided, from not receiving sufficient nutrition. If he is still kept at work, the cartilages will be destroyed, and the bone itself comes into wear, which, after a while, presents a series of ridges, caused by the unequal movement of the surface of the opposing bone. This stage of the disease is invariably associated with an ossific deposit on the synovial membrane and surrounding parts. When a joint assumes that character, there is no artificial means which we can adopt to restore it to its normal condition.

In the treatment of bog-spavin, attention must be paid to the existing stage. Perfect rest must be allowed, and the animal put on a laxative diet. A dose of purgative medicine should be given. Shorten the toe, and apply a shoe with high heels, which relieves the strain on the joint, to a certain extent. Fomentations of hot water should be applied several times a day, and the hock bandaged with wet cloths. At the same time occasional doses of diuretic medicine should be given. After using hot water for some days, cold applications may be tried, and the joint should be kept constantly moist. After the inflammation is subdued, blisters are useful, and should be applied over a considerable extent of surface. The whole front of the hock should be invested, and the blister repeated, at intervals of ten or fourteen days.

Remedy for Bloat in Cattle.

THE term bloat signifies a gaseous distention of the stomach and bowels; it is occasioned by the evolution of gas from food in a state of fermentation, which results from an impaired state of the digestive functions. The best remedy for the same is as follows: Dissolve in a quart of warm water, about two ounces of hypo-sulphite of soda; then add two ounces of fluid extract of ginger, and drench the animal with the same; give enemas of soap-suds about every 20 minutes, or until the animal passes flatus from the rectum, when immediate relief is the result. Every farmer should keep a supply of the hypo-sulphate of soda on hand; it is valuable medicine for flatulency or windy distensions in all its forms, and combined with a small quantity of ginger and golden seal, it makes an efficient remedy for colic occurring in horses.—*Boston Cultivator.*

Correspondence

Professor Buckland's intended Tours.

To the Editor of THE CANADA FARMER:

SIR,—In an article in your last number, on the subject of Agricultural and Veterinary instruction, you intimate that it is my intention to make agricultural tours in the country, with a view to excite a greater interest among the people, in the promotion of agricultural knowledge and improvement.

Will you allow me a brief space in your valuable columns, just to state what my intentions are, and how I propose to carry them into execution?

Occupying the chair of agriculture in our Provincial University, I have long felt the great desirability, if not absolute necessity, of becoming more intimately acquainted, by personal observation, with the state of agriculture throughout the Province, and of a more frequent intercourse with the cultivators of the soil. Such a course, as results have already shown, is essential to the maintenance of my agricultural position in the country. Formerly, when I had leisure and opportunity for getting about the country, not only was my class in the college better attended, but in other respects my means of public usefulness were increased.

In undertaking the charge of residence in University College six years ago, I resigned the situation of Secretary to the Board of Agriculture, and devoted my best attention to the duties of my new position. These, by gradually increasing, as also from their nature, kept me confined mainly to one place, thereby cutting off that personal intercourse with farmers, except in the vicinity of Toronto, which is so necessary to the full discharge of my professional obligations. Hence, I have been led to resign the charge of residence in the college, simply because I found the duties of that position became every year more incompatible with the claims of agriculture. And here, I may be permitted to remark, that during the period in which I held that situation, I enjoyed the respect and confidence of the Council, whose kindness will be ever gratefully remembered.

It is thought that the agricultural course in the college might be comprised within Easter Term, embracing the first three months of the year; an arrangement that would afford me ample time for visiting the country; which I propose to do in a thorough and systematic manner.

I could wish to spend sufficient time in each county to meet every agricultural society in it, and to make myself practically acquainted, by personal observation, with the existing state of agriculture, with special reference to its improvement, and the more efficient working of societies. I have long been of opinion that these important objects could be more effectually obtained, if the members of agricultural societies were to hold more frequent intercourse with each other, by attending stated meetings, for the consideration and discussion of such subjects as have an immediate bearing on their own pursuits, and the locality in which they live. Wherever these means have been fairly tried, the best results have followed. The agricultural mind is peculiarly liable to become sluggish, when not occasionally aroused; and the farmer, perhaps, above all men, needs reminding that his personal success in business, as well as the advancement of his art, requires as much the exercise of his mind as the labour of his hands. In going through the country, I hope to be able to do something effectually towards the formation of a Provincial Agricultural Museum, for which the Board has already provided a capacious hall in this city, to which visitors and emigrants coming to this section of the Province might resort, and obtain much needful and reliable information.

Further, it appears to me that in perambulating the Province, much valuable material may be collected, for illustrating its condition and capabilities, at least as far as its agricultural and rural life are concerned; and I think that an occasional article on what have been subjects of personal observation, addressed to our leading agricultural journals in the United Kingdom, would tend to awaken more attention to this country, and its vast, and, as yet, in a great measure, undeveloped resources.

Until the late deplorable civil war in the neighbouring Republic had attained such gigantic proportions, as to render, in the eyes of the world, our position in these British Colonies, somewhat uneasy and precarious, I was in the habit of frequently receiving letters of enquiry from parties in the old country, for practical purposes. As a brighter day is at length dawning upon us, Providence having this year blessed the labours of the husbandmen with abundance, and our neighbours with the still greater blessing of peace, we may reasonably hope that an improved emigration will speedily set in towards our shores; and that, by a wise improvement of our opportunities, a long period of tranquility and prosperity awaits us in the future.

GEO. BUCKLAND.

UNIVERSITY COLLEGE,
Toronto, Nov. 23, 1865.

Maple Sugar at the late Provincial Fair.

To the Editor of THE CANADA FARMER:

SIR, Although it is some time since the Provincial Fair took place at London, I think it quite worth while to send you three specimens of maple sugar, which were all exhibited at that fair,—in order to prove the necessity for competent judges being appointed, to do justice to the articles exhibited, and to encourage the industry of the enterprising exhibitors.

Mr. Samuel Williams, of the township of Dunwich, was the exhibitor of these sugars. He has two modes of manufacture—one, by the ordinary mode of pouring the hot sugar into a mould, which becomes cake sugar, and the other of graining it. The latter process consists of rubbing the sugar in the hot kettle, and keeping it stirred until the water is entirely evaporated. This is called "*stirred*" or "*grained*" sugar. The sapient gentlemen who passed their opinion upon these sugars, would not believe that the two finer specimens of these three parcels were pure and unadulterated sugar at all, but insisted that they must have been mixed with "*something*" to give them the beautiful, bright and white appearance which they bear. Now, as I happened to be present last spring when Mr. Williams was making sugar, I can testify that they are the simple and pure produce of maple sap, and I send these specimens to you to test them in any way you think proper, because Mr. Williams thinks injustice has been done him. For the two grained sugars he received no prize at all! Whilst for the *hard* or *cake* sugar, he received the first prize; which any one, who knows ought about it, will see is the inferior specimen.

While alluding to the subject of the Provincial Exhibition, I may state that the practice of exhibitors attaching their names to articles exhibited, affords the judges the opportunity of showing great favouritism, leads to dissatisfaction, and puts the honest exhibitor in a false position, against the exhibitor who wishes his own name or reputation to help him to a prize, which the article exhibited often does not merit.

D. J. HUGHES.

St. Thomas, C. W.

NOTE BY ED. C. F.—The specimens of maple sugar submitted, entirely bear out our respected correspondent's remarks. The importance of having, as far as is practicable, thoroughly competent judges for each department of the show, cannot be too strongly insisted on. At the next Provincial Fair, we trust there will be less ground for complaint. With respect to the name of the exhibitor being attached to competing articles, great diversity of opinion exists,—and "much might be said on both sides" of the question. The same practice is adopted at the exhibitions of some of the principal agricultural societies in Britain, and we scarcely remember an instance where a shadow of suspicion has been attempted to be cast on the honour and integrity of the judges. If the name of the exhibitor did not appear, we presume there would be little difficulty for judges, who were open to improper influences, to ascertain all particulars respecting any article, on which they were called upon to exercise their functions. At the same time, the absence of the names of exhibitors, so far as the press and the general public were concerned, would rob the show of much of its interest.

HOW TO REGISTER.—"A Subscriber," writing from Wellington Square, propounds the following enquiry:—"Would you please inform me how I am to proceed in order to register a Devon heifer, two years old this fall. Both of her parents are registered in the Upper Canada Stock Register, but by some neglect she was not entered. If you can merely inform me to whom I am to apply, in order to do so, you will greatly oblige me."

ANS.—Apply to the Secretary of the Board of Agriculture, Toronto.

PRECOCIOUS FOWLS.—"R. A. W," of Toronto, communicates the following:—"I have Brahma Pooter fowls, hatched 7th June, laying now (Nov. 11th.) I would like some of our poultry friends to take a note of this, and let us know if they can beat it."

YOUNG ALDERNEY BULL WANTED. "J. S. Smith," of Port Hope, asks the following questions.—"Can you tell me where I can buy a young Alderney bull, not more than one year old? What price ought I to pay for a fine animal of that age?"

ANS.—After careful enquiry, in well informed quarters, we have failed to hear of the existence of any pure Alderneys in this Province. None, at least, are publicly known. There are several eminent breeders of Alderneys in the States, chief among whom we may name John Giles, Woodstock, Connecticut, Dr. Twaddell, Philadelphia, and John T. Norton, Esq., of Farmington Ct.,—all of whom, we learn, have used this somewhat delicate breed for upwards of ten years, for dairy purposes. If our correspondent communicates with any of those gentlemen, we have no doubt he will be furnished with any particulars he may desire.

NON-RECEIPT OF "THE CANADIAN BEE KEEPERS' GUIDE."—"H. E. Jaffary," of Macville, writes anent this subject as follows: "I send my address as requested in your issue of Oct. 16, and beg to say that I addressed a letter to J. H. Thomas & Bros., Brooklin, U. S., and said, 'I send you enclosed two dimes and a half a dime, which I understand is the price of your Bee Book.'"

ANS.—It turns out precisely as we suspected. The non-appearance of the book is the result of your letter being mis-directed. The correct address is: J. H. Thomas & Bros., Brooklin, *Canada West*—not Brooklin, United States. Enclose twenty-eight cents,—twenty-five for the book, and three cents to defray postage.

THE GOVERNMENT AGRICULTURAL GRANT.—"W. E.," writes as follows:—"Will you please answer the following questions in your next issue of THE CANADA FARMER, and oblige a large class of agriculturists, in the East Riding of Northumberland. What season of the year is the Government Grant, for agricultural purposes, paid to the different County Treasurers, so as to be available to the Branch Societies? Does the law provide for County Treasurers to hold the funds until the day of exhibition, (to the very great annoyance and inconvenience of the Branch Societies,) without any official notice in reference to them?

ANS.—The time at which the Government Grant is made available, entirely depends on the date at which the Supply Bill is voted in the Provincial Parliament. This year, for example, it was not passed till the summer session, somewhere about September 20th. The County Treasurers were, therefore, unusually late in receiving their respective allotments of the funds. There is no legal provision made as to the length of time, during which, the County Treasurers may hold the funds; but, we presume, it is understood that they will hand it over to the respective Branch Societies, with all convenient speed.

FRUIT TREES PRODUCING TWICE IN A SEASON.—"W. Whittet," of Moore, writes as follows:—"Can you tell me of any instances of fruit trees producing twice in one year? I enclose a few blossoms from my plum trees, which present the appearance of spring in the month of September. The trees are of different ages, from five to seven years old. They flourished profusely last spring, and though partly destroyed by frost, a few plums came to maturity. About three weeks ago the leaves commenced falling off, and for a week the trees had the appearance of autumn. But as if repenting their too hasty preparation for winter, they again attempted to re-attire in their spring and summer garb. Can any practical nurseryman tell the cause of such a phenomenon, and say what will be the effect on the trees? What might be done to assist nature in forming a new set of buds for next spring?

ANS.—Similar phenomena were observed in several districts in Britain during the present autumn. An unusually mild and open season was obviously the cause. We do not apprehend that any special treatment of the trees will be requisite to make amends for the very slight additional exhaustion, caused by a second growth of blossom.

A REMEDY WANTED FOR THE APPLE BORER.—"W. B," of Landsdown, writes as follows:—"Can you inform me of a cure for the borer in fruit trees? I planted an orchard three years ago; and I have cultivated it and mulched the trees every spring, and in the fall hoed or dug the manure in. This fall I found the borer had done a good deal of damage to

them. You recommend to wash the trees with soap-suds and sulphur, I have washed them every year with soap-suds, without the sulphur. I will try the sulphur next spring, but I think that there must be other preventives."

Ans,—We are not aware that any specific remedy has been found for this destructive orchard pest. The suggestions of the *Rural World*, which appear at p 333 of the present vol. of THE CANADA FARMER, may probably be useful to our correspondent. A recent exchange has the following:—"We are determined to persecute the borers till they shall seek other quarters than our orchards. We are trying a novel experiment. We box up the trees a foot from the ground and fill in with shavings or saw-dust. If they attack the tree, it must be above the box where they can easily be seen. It is easily done, and we see no reason why it will not be a preventive."

A PROBLEM TO SOLVE.—"A. C. A." writes as follows: "We find in raising stock that by proper breeding, good feeding and judicious management, nearly every kind of animal can be brought to a state approaching perfection. Sheep, however, appear to be an exception to this rule. Notwithstanding all the feeding and breeding, washing and clipping a perfect sheep is not produced, unless about two-thirds of the tail is cut off. Does nature make an awful blunder in producing lambs with long tails, or is the fashion of cutting them off at fault? I know of no other case where universal opinion disapproves of nature's productions. I know there are a lot of fast young men in the world, who crop and dock their dogs' tails, and thereby think they improve their looks; but I think if some of them were cropt and docked themselves, they would look quite as well as their dogs do."

Ans.—At first glance, the practice of docking lambs seems to savour of the barbarous. Experience proves, however, that the custom is prompted by humane intentions. In many instances it saves the animal from much future suffering, by preventing an accumulation of filth, and the production of maggots therein.

FALL FAIRS IN THE OTTAWA VALLEY.—On this subject "Rusticus" communicates the following gratifying information:—The agricultural community have taken a more decided interest in the many show fairs which have taken place in this county than they generally do. Five of the townships have participated in the Government grant this year, and I don't think there were ever more than *three* before. The competition at each was very spirited. It is granted on all sides that there is a vast improvement in the number and quality of the articles displayed, particularly in sheep and horses. Some of Mr. Snell's celebrated Leicester sheep have found their way down here, and have won the honors, both themselves and progeny. As an instance, a neighbour of mine, who bought a ram lamb of Mr. Snell at Hamilton last year, took first for both ram and ewe lambs, although he got nothing for ewes. Another neighbour of mine, in 1862, from 29 ewes, raised 53 lambs and sold 173½ lbs. of wool. Now this beats Mr. D.W. Dubois, mentioned in THE CANADA FARMER of Sept. 15, as having productive sheep. Owing to the drouthy weather, the root crops have suffered severely. Many farmers will also have much less straw than usual on the same account."

RECIPE FOR MAKING GRAPE WINE.—"J. S. H.," of Belleville, sends a recipe for making grape wine, prefacing it as follows:—"As your correspondent, A. B. Brownson, of Bayfield, expresses a wish for some instruction in wine-making, I send a recipe which I believe may be depended upon. At the same time I would request that in case it may prove successful, an acknowledgment may be made in THE CANADA FARMER."

Take 50 lbs. of grapes, and 37 lbs. of fine moist sugar. Provide a tub that will hold from 15 to 20 gallons, taking care that it has a hole for a tap near the bottom. In this tub bruise the grapes, when done add 4 gallons of water, let the whole be well stirred together; cover the tub with a cloth, and let the materials stand for 24 hours. Then draw off the liquor through the tap, add one or more gallons of water to the pulp, let it be well stirred, and then allowed to remain an hour to settle. Then draw off, mix the two liquors together, and in it dissolve the sugar. Let the tub be cleaned, and return the liquor to it, cover it with a blanket, and place it in a room, the temperature of which is not below 60° Fah.,—here it ought to remain 48 hours or more,—until there is an appearance of fermentation having begun, when it should be drawn off into a 10 gallon cask as fine as possible. The cask must be filled up to the bung hole with water. If there is any liquor left in the tub not quite fine, pass it through flannel, and fill up with that instead of water. As the fermentation proceeds and the liquor diminishes, it must be filled up daily to encourage the fermentation, for 10 or 12 days. It then moderates, and the bung should be put in, and a gimlet hole made at the side of it, fitted with a spile. This spile should be taken out every 2 or 3 days, according to the state of the fermentation, for 8 or 10 days, to allow some of the generated gas to escape. When this state is passed, the cask may be kept full by pouring a little liquor in at the vent hole once a week, for 3 or 4 weeks. This operation is performed at long intervals, of a month or more, till the end of December, when on a fine frosty day it should be drawn off from the lees as fine as possible, and the turbid part passed through flannel. Clean the cask, return the liquor to it, with one drachm of pure isinglass dissolved in a little water. Stir the whole together, and put the bung in firmly. Choose a clear dry day in March for bottling it.

The Canada Farmer.

TORONTO, UPPER CANADA, DEC 1, 1865.

Winter and its Duties.

THE season that is now upon us, is regarded by many as dreary, unprofitable and tedious. Winter is not unfrequently reckoned as nearly all lost time, so far as the labours of the farm are concerned. The indoor feeding and care of stock, are counted among the hardships of our northern latitude, and multitudes sigh for a home in a milder climate, or wish that, by some physical revolution, our seasons could be ameliorated.

A Canadian winter, it must be confessed, is not without its rigours and inconveniencies. It is doubtless very pleasant to think of a mild and genial climate, in which cattle need no shelter, roots no housing, and the plough can move every day in the year. But our winters have their advantages, and even charms, while the moderate weather of more southern regions is associated with counterbalancing and compensating drawbacks. It is a favourite theory of ours that, the lot of human beings, on this earth, is pretty well equalized, and that a fair statement of pros and cons would show that while special considerations may properly enough dictate a choice, there is no region that is absolutely best. Health statistics make it appear that the temperate regions are the most salubrious in the world. These climes are also most favourable to mental vigour, to the development of energy, and the promotion of true refinement, and elevation of character and manners. The bone and sinew, the flower and elite of the world's population, are to be found in these regions. A delicacy of constitution, and an effeminacy of mind and character, seem inseparable from perpetual summer. Just as the winter of adversity toughens and strengthens human character, so does the physical winter harden vegetable fibre and animal muscle, and exert an invigorating influence upon both mind and body. Winter is a most valuable tonic, though, perhaps, like some other tonics, it may not be quite pleasant to take.

But we will not now attempt an exhaustive discussion respecting the advantages and disadvantages of winter. Enough that the stern reality is before us, and must be accepted as an unalterable condition of life in Canada. Our wisdom is to adopt such measures as we can to mitigate its hardships, to reap its advantages, and turn it to useful account. This is the season for consuming the crops that have been grown during the genial summer-time. In the growing season, good economy dictates that the farmer should raise heavy crops, and, in the feeding season, good economy demands that there be no waste but that the food provided be made to go as far as possible. Comfortable shelter not only promotes the warmth and well-being of animals, but makes their food go farther. By preventing waste of animal heat, it is easier to keep stock in good condition. Regularity in feeding also important. The chaffing of hay and straw, mincing of corn stalks, and grinding of grain, are modes of economizing feed, which it pays to adopt. Straw should be carefully saved. With a little meal added, it forms a most useful fodder, and will keep growing animals in fair condition. Clean, bright straw, is better than poor hay. Refuse, dirty straw, should be dried and kept for litter. It is also useful for covering roots in the field, and in cellars not quite frost-proof. Where straw is abundant, very comfortable cattle and sheep sheds may be made with it. The care of his animals, may be put down first on the list of the farmer's winter duties. Every arrangement possible, for facilitating and lightening this duty, should be resorted to. A little trouble and expense, at the beginning of winter, will often secure conveniencies which will greatly lighten the labour of attending to stock. Cracks and openings, that admit cold currents of air, should be stopped; doors well hinged and provided with fastenings; and a convenient plan adopted for clearing out manure. Stables require means of ventilation, and should at all times be kept sweet and clean. Fresh air is a necessary of health and life, in the case of all animals.

Next to the care of stock, we should put on the list of winter duties, manure-making. Thousands of acres of land are suffering for want of dung. Like the daughters of the horse-leech, the soil continually cries, "give," "give." How can it be otherwise, when man is constantly taking of its wealth, in the form of vegetable products? The great want of every farm in the land is MANURE! MANURE!! The manufacture of this important article should be constantly and carefully attended to. It is, however, greatly neglected. Tons upon tons of rich fertilizing material are wasted, by drainage and evaporation, every year. Manure cannot be properly saved without a cellar or tank, and a roof of some sort. Into the cellar everything should be tumbled, that is capable of decomposing. The roof will prevent the washing away of the soluble particles by the rain. Both the solid and liquid droppings of animals should be saved with rigid economy. With these may be mixed, swamp muck, leaves, turf, spent tan bark, in short, whatever can be scraped together, that will rot. The contents of the pig-sty and fowl-house are among the richest manures, and should be turned to good account. Most farms have on them some low place in which muck may be found. It will be good exercise for the teams to haul up a large supply of this valuable material, in the winter time. It can be got at and dug at this season of the year, better than any other.

In many parts of the country, where wood brings a good price, and farmers have considerable timber, wood-chopping and hauling is profitable winter work. When only the family supply of wood can be afforded, year by year, this is the season to get up a stock of firing. It is wretched policy to burn green wood, and very poor management to bring it up, a load at a time, as it is wanted. The farmer's wood

lot is beginning to be a most important affair. In many parts of the country, timber grows scarce. Those who have it will do well to avoid all waste, and provide wisely for coming years. All fallen timber that can be used should be converted into firewood. Dead trees should be felled. A culling process that will make the piece of woods last as long as possible should be adopted. All fence timber should be carefully preserved. Fuel and fencing will be costly things on many a Canadian farm before long. Not only firing, but material for making new fences and repairing old ones, ought to be provided in the winter time.

This is usually regarded as a season of comparative leisure, but it may, if desired, be made as busy a time as any in the year. In addition to the duties already spoken of, there are many useful and necessary matters that can be attended to in winter, better than at any other time. Most farmers have some skill in the use of tools, and can make a variety of articles needed on the farm, such as gates, waggon racks, sleds, stone-boats, rollers, drags, &c. There is no better time than winter for providing such things. Farm accounts should now be straightened up, and much thought bestowed on the doings of the past year. The questions, "what errors have I committed? what successes have I gained? and wherein can my farming be improved?" should be well weighed during many an anxious hour. Plans for the coming busy season should be carefully formed. Books and periodicals devoted to agriculture should be closely studied, and a note made of valuable hints, for future reference and use. Reading on general subjects, with a view to the improvement of the mind, may properly claim a portion of time. The farmer need not be a dunce or an ignoramus. Let him seek and intermeddle with all wisdom. It is an objection urged sometimes against rural pursuits, that farmers, as a class, are so uneducated and uninformed, and that it is not easy to find intelligent and refined society among them. Let this reproach be taken away from this most noble of all secular pursuits. The long winter evenings not only give opportunity for reading and reflection, but for lectures, farmers' clubs, &c. These ought to be established in every neighbourhood. Prejudice against book-farming and innovations ought to be laid aside, and "EXCELSIOR!" adopted as the universal motto.

These hints may suffice to show how much of real work may be crowded into the season of winter. But we by no means advocate a tread-mill mode of existence,—one in which incessant plodding, at work of some sort or other, is to be going on. We believe in recreation, and winter is a good time for that. There are many indoor enjoyments that may be had: music, singing, sensible games, social gatherings, and the like. There are out-door recreations also: sleigh-riding, hunting, skating, &c. As we pointed out about a year ago, every rural neighbourhood might have, at small expense, a rink for skating, curling, &c.; and many farmers, with creeks flowing beside their doors, might provide such a source of amusement for their own families. We believe that as a class, farmers unbend from hard work too little. A day now and then during the other seasons, as well as in winter, may be well spent in relaxation and recreation. The farmer himself, his often too hard-worked wife, and his children, secluded from the busy world, would be gainers every way, by periods of wisely chosen amusement. "All work and no play" not only "makes Jack a dull boy," but has a like effect on Jack's father and mother, and indeed upon the whole family. Or, to quote Æsop's graver saw, "the bow always bent loses its spring."

The Rinderpest.

THIS fatal pestilence still stands foremost among the agricultural questions of the day. The London *Times* does not now devote two or three columns daily to chronicle fresh outbreaks, as it was wont to do some weeks since. The British public are, therefore, mainly indebted to the culpably meagre, and confessedly incorrect returns, issued by the Privy Council Office, for a record of the deadly operations of the plague. The statistics in question are a kind of vague cattle-mortality-bill, since the first appearance of the rinderpest in Britain, up to the second day of November. It is not attempted to be concealed, by the authorities themselves, that the numbers they publish are unreliable. Imperfect as the statistics are, however, they are yet sufficient to prove that the widely circulated reports of the gradual cessation of the plague were without foundation. The number of cases tabulated in the Government returns are as follows:—

During the week ending the 14th October,	1054
" " " " " 21st "	1729
" " " " " 28th "	1873

There can be no disguising the fact that when nearly two thousand animals are prostrated in one week, the infection of an enormous amount of stock is indicated. Judging from the reports of newspapers published in the rural districts of Britain, we are disposed to believe that the area of infected country is widening every day. Since the commencement of the outbreak, it is probable that close upon 30,000 animals have succumbed to the fatal plague. It is difficult to conceive the loss to the country, which this statement implies. Apart from the immense pecuniary value of the animals themselves, the loss in grass rotting in fields, the income from the milk supply, the rents from the untenanted sheds, and other obvious considerations, would figure up a much larger sum of money, than is merely represented by the net value of thirty thousand head of cattle.

We notice that much discussion,—not always good-natured,—is still going on in the British agricultural journals, as to the origin, and curability of the plague. The balance of evidence seems to be poised pretty equally between the Russian and home generation theories. It seems questionable, whether or not a satisfactory solution of this question will be evolved from the tempest of speculative discussion going on at present, between the allopathic and homœpathic medical practitioners. With respect to the treatment of the plague, the former are meeting it by barbarously recommending the immediate slaughter of its victims. In the meantime, the homœpathic practitioners in England and Holland, not only profess to cure, but are actually curing a considerable majority of the cases committed to their care. As *Bell's Messenger* aptly remarks,—"The doctor who says he can cure a disease which other doctors have pronounced incurable, or have failed to cure, will naturally be regarded either with extreme respect, or extreme contempt." But, "to the owner of stock upon which the plague falls, it matters very little—it matters, in fact, nothing—whether his cattle are restored to health through the agency of a 'regular' veterinarian, or through the instrumentality of one whose system is based upon principles and data, to which long-established custom has not yet imparted the prestige of respectability. He praises the bridge that carries him over, and believes in the worker of what is equivalent to a miracle." With respect to the successful treatment of the disease, some very important statements, from reliable statistics, were recently made at Norwich, by Lord Bury. Some 4,700 cases of rinderpest, it appears, have been treated in Holland, and of these 45 per cent. have been saved, through the means of the allopathic and homœpathic treatment,—the latter having proved by far the more successful. The following extract from Lord Bury's speech, as reported in an English contemporary is conclusive on this point. "In September, when the cattle plague was raging in Holland, two Belgian gentlemen, M Gandy, a member of the Veterinary College, Brussels, and M. Scutin, a homœopathic chemist, offered to the Dutch Government that if a district were put under their charge, and if they would not allow them to be interfered with, and would not require them to make a report until a sufficient number of cases had been treated, they would on their part give their services gratuitously, and try the system fairly. This was accepted by the Dutch Government, who agreed to give a commune up to the homœopaths, it being understood that the veterinary surgeon of that commune should be required to certify that every case which came under homœopathic treatment was an actual case of Rinderpest. Matterness, the district assigned to the homœopaths, was a commune situated in the very centre of the infected district. The peasants and proprietors were somewhat prejudiced against the homœopathic system in the first instance, and did not enter cordially into the view of the homœopaths, but before the termination of the experiment they were greatly pleased with it, and gave every assistance in their power. At the commencement of the experiment the proportion of cures effected out of the animals attacked was 70 per cent., but in the last three weeks the homœopathists saved nine out of every ten cattle which came under their treatment. Matterness was situated within a mile of Kethel, in the very centre of what had come to be styled the 'black district,' so that the homœopathists did not enter upon their tasks under peculiarly favourable circumstances. They continued it till Sept. 22, and 80 beasts came under their care, each case being certified by the veterinary surgeon as one of actual rinderpest. Of these 80 animals 60 recovered and 20 died. Besides these, 230 beasts in the commune were put under prophylactic homœopathic treatment; 25 took the disease before the treatment had had time to work, but in the fourth week no fresh cases had occurred, and on the 21st of October the commune was pronounced free from disease, and had remained free from that time to the present. A large proportion of the cattle attacked in the commune of Matterness had been treated by the allopathists before the homœopaths came into the district. In all, 189 cases came under treatment, 80 under the homœopathic system, and 109 under the other. As 73 cures only were effected, of which 60 were attributed in an official report to the homœopaths, the balance was largely in favour of the homœopathic mode of treatment. To the 73 cured ought, however, to be added a portion of those still reported as under treatment, as some of them, no doubt, recovered. The remedies which were employed by the homœopaths were arsenicum, phosphorus, phosphoric acid, rhus tox., and sulphur. It was found that all cattle could not be treated alike, as every case had to be dealt with on its own merits. These details proved, he thought, that the disease was amenable to treatment, and that our plan of knocking on the head every animal which happened to be attacked was barbarous and unwise."

It will, in all probability, be objected by the orthodox practitioners in Britain, that the above medicines are prescribed as specifics, and that, therefore, the homœopathic practitioners are quacks. "Possibly," as has been well observed, "*the handing after* specifics is a mark of ignorance and weakness in medicine, yet the neglect of them is proof also of immaturity; for, in fact, *all medicines will be found specific in the perfection of the science.*" Dispassionate consideration is necessary on this, as well as on all other subjects. In an age of progress, a despotism of preconceptions cannot be tolerated. It does not follow that the dictum of even the greatest medical authorities is infallible. In the present lamentable condition of things, the British farmer who cannot bring the requisite amount of moral courage to form an independent opinion for himself—in spite of the sneers and sarcasms of eminent veterinary authorities—is a "slave not only to others but to himself."

DEATH OF DR. LINDLEY.—We regret to learn, from our recent British exchanges, that Dr. John Lindley, the distinguished Professor of Botany, in University College, London, is no more. He was born in February, 1799, at Catton, near Norwich, where his father was proprietor of a large nursery garden. At an early age, he devoted his attention to botanical science, and, when quite a youth, contributed some able papers to the "Transactions of the Linnæan Society." About the year 1820, he proceeded to London, where he became Assistant Secretary to the Horticultural Society. Mr. Loudon soon after engaged him to write the descriptive portion of his "Encyclopædia of Plants," the merit of which, as a botanical work, was entirely due to Dr Lindley, as was stated in the Preface. This work was completed in 1829, and in the same year he was appointed Professor of Botany, at the London University. In a "Natural System of Botany," published in 1836, Dr. Lindley took new views of botanical classification, and proposed a new nomenclature for the families of plants. Ten years later, his great work, "The Vegetable Kingdom" was published. "This work, the most elaborate that had appeared on systematic botany, gave a description of all the families of plants, and more especially of those most useful to man. It gave very extended lists of the genera, and was generally recognised as one of the most important contributions which had appeared at that time on systematic botany. While engaged in writing these works, Dr Lindley was most diligently employed, as a practical botanist, in describing new species, on which he wrote a large number of papers contributed to botanical publications. In 1841 he became the editor of the "Gardeners' Chronicle," a weekly publication, which he conducted with great ability. In 1860 he was appointed Examiner in the University of London. He was a Ph. D. of Munich, and a Fellow of the Royal Society, of which in 1858 he received the medal as a reward for his services to botanical science."

British Gleanings.

Hints on Furnishing.

A writer in *London Society* gives the following instructions on this subject:

"Our theory is that no one thing should catch the eye. There should be harmony throughout; and we would recommend that great attention be paid to the colour of the walls. If they, the ceiling and the carpet are well selected all other points of detail are like the finishing touches of a picture. The right tone having been attained, the rest is comparatively easy.

We have found grays, light greens, and pale mauve to work up well; and the less pattern there is in the paper the better, unless for some special reason, a chintz paper is desired. If the room faces the south, a cool gray or mauve is good; and for a north room we have seen a yellowish green answer admirably, imparting to the room an appearance of sunshine.

"As a rule, we have found it best to avoid reds, especially a dark red, which is offensively dingy.

"Blue is a dangerous colour to use. It is so apt to make a room either gaudy or cold; though we have seen it effectively used with pink to give a Pompadour look.

For carpets we incline to small inoffensive patterns and generally avoid those which are flowery, as being in theory and effect bad.

"As to the arrangement of the furniture it is difficult to say much, as everything depends upon what it consists of. But we have generally found it desirable to keep the centre of the room and the space before the fire quite free, and to eschew a round table. If we must have one we prefer pushing it into some corner of the room— anywhere but in the middle.

"We once asked a lady who was conspicuous for the excellent taste she displayed in furnishing her rooms, wherein her secret lay, and she said that she invariably made it a rule never to employ any one person exclusively. She bought what she wanted wherever she could find it; and certainly the result was perfect. There was a harmony and a variety that was most pleasing."

☞ An Irish gentleman parting with a lazy servant-woman, was asked, with respect to her industry, whether she was what is termed *afraid* to work. "O, not at all," said he; "not at all; she'll frequently *lie down* and fall asleep by the very side of it."

A Fact for the Beemaster.—The *Scottish Farmer* relates the following: In a cottage near Evanton, Ross-shire, a bees' nest was last month found in a pair of men's drawers that had been laid aside! The little colony had established themselves in the woollen garment for winter quarters, but, like many other squatters, have been evicted.

A Healthy Parish.—Says the *Banffshire Journal*: The parish of Alvah boasts of its climate as being very favourable to longevity. The climate seems to be especially favourable to feathered life. A correspondent informs us that "Mr. Pirie, blacksmith, Slacks of Tipperty, has a crow 18 years old, and Mr. Anton, Clayfolds, has a goose 25 years old.

An Uncommon Brain Disease.—The *Carlisle Examiner* says:—"A coroner's inquest was concluded a few days since at Carlisle, upon the body of a factory woman named Gallagher, aged 22, who died somewhat suddenly last week. It was at first suspected she had been poisoned; but a *post mortem* examination proved that death had been caused by apoplexy, induced by the presence of a parasite called Cysticercus in the left verticle of the brain."

Introduction of Partridges into New Zealand.—We (*Canterbury Times*,) are glad to welcome back from England an old settler, Mr. Dunnage, who arrived here on Friday week last, making the passage from England to Timaru in eighty-eight days. Mr. Dunnage brings out with him eight patridges, all healthy, and in fine condition, which he intends to turn loose on his run. We most heartily wish him every success in the attempt to introduce such a valuable bird into this district.

Scant Milk Measures.—We learn from *Bell's Messenger* that recently at the Session House, Newington Causeway, the magistrates were engaged for a long time in investigating cases of unjust weights, scales, and measures, and amongst them were several referring to measures taken from the possession of cowkeepers in the neighbourhood of Kennington, Clapham, &c. The evidence showed that the measures supposed to be half-pints were much below the standard, and many were unstamped. The defence in most instances was, that owing to the cattle plague, the price of milk had been raised, and to meet the wants of the public, measures had been made which held less than half-a-pint. The Chairman said it was the opinion of the Bench that the cowkeepers or milksellers seemed to have imagined, because they had been compelled through the cattle plague, to raise the price of milk, that they might give short measures as well, but the law would not admit of such an excuse for robbing the public Penalties in each case from £2 to £3 were inflicted, with a caution that next time the full penalties would be inflicted.

Sale of Entire Horses.—We learn from the *N. B. Agriculturist* that Mr. Miller, Beith, has purchased three first-class stallions, for exportation to Australia: "One of these, viz., Champion (better known in the west country as the Bilbirnie Horse)—a very superior animal, gainer of many prizes in England and Scotland, to the value of 250*l.*, was bought from Mr. Marshall, Howes, Annan. Another, a very excellent four years-old, winner of the 40*l.* prize at Glasgow last summer, was purchased from Mr. James Kerr, Lochend, Kilbirnie; and the third, a capital three year-old horse, named Tooraladdie, well known in the Upper Ward, from Messrs J. and W. Muir, Hardington Mains. The prices of the three amounted to 700*l.*"

Heated Feet After Walking.—The following suggestions are made by correspondents of *The Field*: I beg to inform H. M. that soaking my feet in water, as hot as I could bear it, after every walk, soon hardened my feet and reduced the great heat in them.—Dryasdust.

—— If H. M. will follow out my instructions, I think he will not suffer long in the way he describes. Always walk in knitted woollen socks. After walking to bathe the feet in tepid water, with one ounce of sal ammoniac to the pailful. To be quite certain that the soles of his shoes are sufficiently wide not to wrinkle the skin of his feet (the boots made by Messrs Fagg, of Panton-street, are admirable in this respect.) I speak from experience, having at one time suffered much in the way H. M. mentions.—Finder.

Earl Dudley and the Game Question.—We learn from the *Mark Lane Express* that "Earl Dudley has just made a very liberal concession in his tenantry in Worcestershire, his lordship having granted permission to them to kill the game, for their own use, on their respective farms. Hitherto the game has been reserved by his lordship for his own shooting and that of his friends; but, in a circular just issued to the tenants, his lordship gives them permission to kill it on all the farms, reserving only the covers for himself and his friends. He stipulates, however, that none of the game shall be sold, but that, if there should be any surplus, after supplying the tenants and their friends, it shall be given to the poor of the parish in which it is killed."

Novel Nest Building.—A recent writer in *Science Gossip*, relates the following:—At Shilford, a farm on the banks of the Tyne, near the Stocksfield station on the Newcastle and Carlisle railway, a pair of bluecaps built their nest in a somewhat curious place. A farm labourer who is accustomed to wash sheep in the Tyne owns a pair of old boots, which he uses for the purpose of protecting his feet during the process of sheep-washing. These boots are each yeaar tied together and suspended on the lower branches of an ash which grows near the edge of the river. This season, on taking down his boots, he was surprised to find several eggs roll out, and that a pair of bluecaps had built their nest in one of his boots. He restored the eggs to their nest, hung up the boots without using them, and in the course of a few days a colony of young bluecaps issued from the pedal envelopes which had been this season, at least, put to a novel purpose."

A Dog Phenomenon.—The *Aberdeen Free Press* relates this strange incident:—A collie bitch, the property of Mr. D. M'Intosh, sheep farmer, Glenfinnie, Glencairn, some time ago had three or four pups. Mr. M'Intosh advised his son to drown the young family, as the mother was wanted to the sheep, and he could not well spare her services on the hill any longer. The lad, glad of the job, took his live freight to a pool, wherein he drowned them, and for better security, and to prevent the mother carrying the dead carcases home to the house, he afterwards buried them in a hole and covered them up. Now comes the extraordinary and almost incredible feature of the story. The bitch having soon missed her young, in a short time disappeared and was seen no more that evening, but she was found next morning in the outhouse, where she used to be with her progeny, and the pups that had been drowned and carefully buried, alive sucking her! The matter appears inexplicable, and only one suggestion can be offered to account for the stubborn fact, viz., that they had not been entirely drowned, as the lad supposed them to have been, and that the mother having soon after scented out the place of entombment, had dug them up and carried them home in her mouth, where by her warm and sagacious care she had revived them to life.

Peat Bogs in Ireland.—We learn from a British exchange that, at a meeting of the Friends' Institute, Mr. John Gough read an essay on peat and its products, which contained the following information about the bogs of Ireland:—

"There are nearly three million acres of the surface of Ireland covered with bog; yet of this only about 1,250,000 is sufficiently deep to justify the outlay of capital in converting it into fuel on a large scale. But, besides this, there are about half-a-million acres of mountain bog where very hard black turf may be found. This bog may be profitably utilized by farmers in the neighbourhood of each; and, although it is difficult to carry the peat when made from such places, it is of so good a quality as to be worth all the cost and trouble. In the two great beds running through—one from Sligo to Howth, and the other from Wicklow to Galway—there is material enough for a period far too long to be looked forward to with fear of the supply running out, however great may be the enterprise in the utilization of the bog.

Time to Manure Grass Lands.—A writer in the *Mark Lane Express* says:—

All sorts of opinions diverse enough are held as to *the period when grass lands should be manured*, some maintaining "any time" may be chosen, and graphically enough saying that, "any quantity" may be given, and that it is scarcely possible to give too much. This, of course, refers to the farm-yard manure or dung; when artifical or portable manures are used, the best time for their application is in sprihg. Autumn manuring with dung seems to be the most in favour, and justly so, especially if the dung is long and not easily assimilated with the crop. One great advantage—and it is not always thought of—obtained by the top-dressing of meadows with long manure in autumn is the protection or shelter yielded by it to the grass in the severe frosts of winter. Some who have paid attention to this maintain that fully one-half of the advantage obtained by autumn top-dressing of grass lands is owing to the shelter given to the plants during frosts by the comparatively bulky manure.

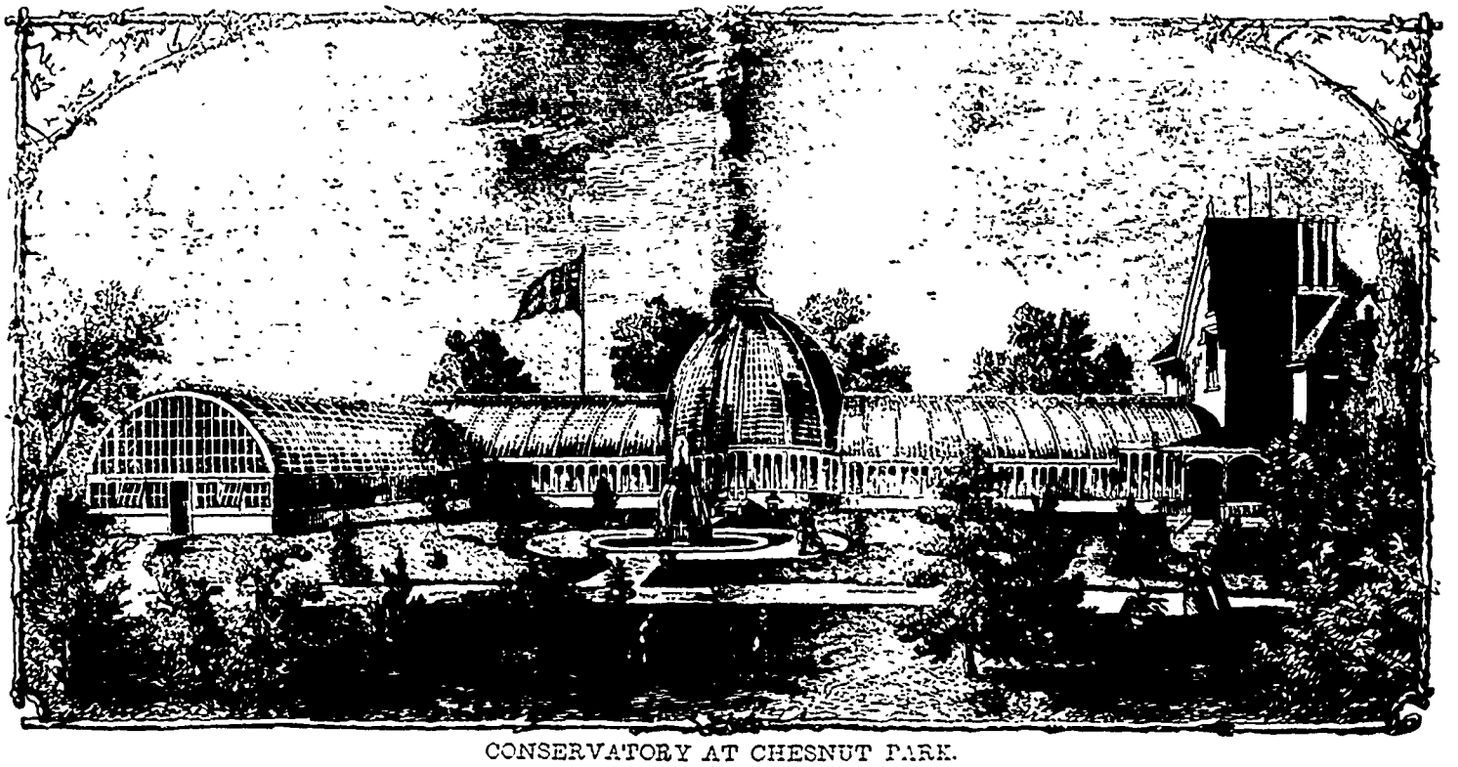
Receipts for Killing Fleas in Dogs.—We find the following in *The Field*:—Having seen several enquiries in your journal for the best method of killing fleas, if your readers will try the following, I think they will not use any other method, for it not only kills the fleas, but cleans the dog's coat and skin:—Saturate a piece of flannel with common naptha, well rub the dog with it, and the fleas will die *instanter*. For a rough-coated dog use a small brush.—Robert Ashsey, (Nantwich).

—— If "F. T. S." wishes an effectual remedy for fleas, let him try benzole, and I'll warrant it will kill every one before it has even time to make its will.—H. B.

—— An old Scotch keeper many years ago gave me an infallible remedy for fleas in dogs. Rub the dog well all over with salt butter, and then wash with soft soap. I have found this answer perfectly for the last thirty years.—Dryasdust.

Receipts for Making Tomato Sauce.—In *The Field* of Sept. 16, "A Constant Reader" asks for a good receipt for tomato sauce. In reply E. C. H. says:—"Boil 12 lbs. of tomatoes until they come to a pulp, then strain them through a sieve, and add ½lb. of salt, three pints of good vinegar, ½oz. chillies, 4oz. white pepper (ground), ½oz. ginger, ½oz. allspice, ½oz. mace, ½oz. cloves, 4oz. garlic, 4oz. eschalots. Boil all together three hours, strain, and make up in small bottles."

—— Another correspondent answers the question thus:—"The following receipt for tomato sauce, which has been in our family for many years, is always considered most excellent. The tomatoes are to be roasted until quite soft, without being in the least burnt; when cold the skin and core must be taken clean from the pulp. To a pint and a half of pulp put a tablespoonful of ground ginger, two spoonsful of young onions shred very fine, a whole capsicum chopped small (or cayenne pepper), and sufficient salt to make it smart to the taste. Add a quarter of a pint of the best vinegar. When well mixed, put it into clean dry bottles. A spoonful of sweet oil should be poured into the neck of each bottle, and the mouth tied over with a piece of bladder. We always put it into rather small bottles, and, if kept in a cool place, it will be good in two years."



CONSERVATORY AT CHESNUT PARK.

Horticulture.

Hon. D. L. McPherson's Grounds and Conservatory.

THE late illustrious and lamented Prince Consort finely pronounced gardening "one of the fine arts." It deserves to be recognized in this character, just in proportion as it rises above supplying the mere cravings of the appetite. Gardening, whenever it contemplates refined and innocent pleasure, certainly deserves to rank among what are known as the fine arts. It deserves the characterization as fully as music, painting, or poetry. It is eminently fitted to be the medium of the purest and most exquisite enjoyment. In the morning of the world it was deemed pure enough by the Great Architect of the universe to be a fitting employment for unsullied humanity in Paradise In this utilitarian nineteenth century of ours, the more we seek to appreciate the dignity and wondrous beauty of "every freckle, streak, and stain of His unrivalled pencil," as seen in the gay parterre, the green-house, or the dusty wayside, the better do we comprehend the silent melodies of nature, and obtain larger and broader views of man and his mission. A sense of natural beauty may be said to be innate in human nature. In the flower garden we have not only every variety of classic beauty in a high degree, but the accompaniments of fresh air, exercise, and pleasant surroundings The enjoyment of the flower garden does not depend on an accurate botanical acquaintance with the flowers composing it. A lady with but slight knowledge of plants, may enjoy it as a kind of open air drawing-room, carpeted with nature's verdant handiwork, its walls formed by graceful trees its ceiling the deep blue sky, and lighted with the glorious effulgence of the blessed sun. To a finely-tuned mind, the mere pleasure of beholding and appreciating such a garden may be termed "a liberal education." In Britain we could point to many charming landscape gardens, but in our comparatively new country they are not yet so numerous. We are glad to observe, however, that a taste for the beautiful is steadily assuming a shape in our midst. In many localities, we could indicate, choice lawns, flower borders, and even conservatories, have sprung into existence within recent years. Foremost among these gratifying manifestations of elevated taste, and superiority to mere money-

CISSUS DISCOLOR.

boarding, are the splendid grounds and conservatory at Chesnut Park, which form the subject of the elegant illustration, herewith presented to our readers As many of them are, doubtless, aware, this fine residence is situated on Yonge Street, a short distance beyond the village of Yorkville. That the enterprising proprietor, the Hon. D. L. McPherson, is a gentleman of cultivated mind and refined taste, is evident from the charming scene of natural and artificial beauty he has created about him. The place, we understand, came into his possession somewhere about ten years ago. At that time, the ground which now forms Chesnut Park was merely an undulating table-land of unkindly clay soil, pleasantly overlooking a pretty wooded valley on the south. During these ten years an artistic conception of natural resources at command, backed by careful and conscientious execution, and a liberal expenditure of means, have transformed the place from its original wild state into a comparative paradise, as our illustration will abundantly show. Our space will not admit of even a bare enumeration of the many charming features which attract the eye everywhere about the grounds, and especially in the conservatory and vineries. The extent of the lawns, and the soft velvety turf with which they are covered, are superb. During the floral season, the flower-plots and borders,—cultivated on what is known as the ribbon pattern,—are conceived in the most exquisite taste. The trees which skirt the margin of the grounds are unexceptionably fine. An occasional specimen of choice statuary lends a classic charm to the place, while the delightful play of the fountain in the summer months, has a refreshing influence on the spectator. The view of the conservatory, as represented by our artist, is its eastern aspect. As will be observed, the direction of the main building is north and south. The vinery is connected with it, and is that portion shown branching eastward at a right angle to the conservatory. The whole range of the two departments measures close upon 240 feet in length. In their construction no less than 12,000 square feet of glass were employed. During winter, and when the temperature of the atmosphere renders it necessary, the buildings are heated by means of

3,700 feet of pipe, in which hot water circulates from the engine-house. One of Hitching's useful and compact little engines is used for this purpose, as well as for pumping water to a large reservoir, which supplies the fountains. The dome of the conservatory measures about 38 feet in diameter, by 40 feet in height. A fountain is appropriately placed immediately beneath it; while from its graceful roof depends a choice profusion of passion flowers and other creepers. The splendid effect produced by those gracefully intertwined wreaths -drooping profusely round the fountain—is a rare treat, not soon to be forgotten Indeed the whole interior of the conservatory presents a scene of wondrous and varied beauty.—Begonias, Caladians, somewhere about eighty varieties of Azaleas, and as many of Camellias, choice ferns, and an almost endless profusion of other stove and green-house plants, attract the eye of the beholder, and fill him with admiration. In the hot-house, which is situated near the northern end of the conservatory, an almost equally varied and choice display invites the eye. It is, however, quite impossible to convey, in the limits of this article, a description of its appearance or contents. The whole place,—grounds as well as green-houses—must be seen to be appreciated. We have selected two plants from this fine establishment, for illustration, by our artist. They will convey a fair idea of the average flowers which grace the conservatory of Chesnut Park, without any pretension to special beauty, or excellence. The first is the *Cissus Discolor*, a climbing plant, and a native of Japan. Its name, we believe, is derived from *kissos*, ivy, no doubt in reference to the scrambling habit of this family of plants. The next flower is the *Datura Knightii*, a native of Peru. It belongs to the Thorn-apple family, and has a peculiarly fine scent, although its seeds and leaves are highly poisonous. The flowers of the specimen before us are large and trumpet shaped, —somewhat resembling the blossom of the Convolvulus, greatly enlarged. This notice would be incomplete, did we omit to state that the floral and horticultural departments of Chesnut Park, are under the management of Mr. Geo. Vair. He is a thorough gardener in the widest and best sense of the word, with a genuine knowledge and love of his profession. His name cannot be altogether unfamiliar to our readers, as several able articles, from his pen, on subjects connected with his profession, have from time to time appeared in our columns.

DATURA KNIGHTII.

Visit to the Lake Erie Grape Islands. The Delaware Grape.

To the Editor of THE CANADA FARMER:

It was my privilege to make a visit, during the last days of September, to the islands in Lake Erie, already become famous for the fine Catawba Grapes which are raised there. I made a short stay upon each of them, and examined the different vineyards, the mode of training the vines, and the several varieties of grapes in cultivation. I also went into some of the wine cellars, and witnessed the process of wine-making in some of its stages. It was a very interesting and instructive visit. There are more Catawba Grapes grown there than of any other kind, and they were selling readily at $160 per ton, for the purpose of being made into wine. But the Delaware Grape seems to be fast growing in favour, and vineyards of this variety are being planted as rapidly as the vines can be raised. The Delaware Grapes had been all bought up when I was there, at twenty-five cents per pound, to be made into wine, and Delaware Wine of last year's vintage had all been sold at $6 per gallon.

I made a careful examination of the vineyards of the Delaware Grape, for the reason that this variety is perfectly hardy in our own climate, and ripens so early that it will perfect its crop every season. I felt that every Canadian had an interest in knowing whether this Grape would yield to him, in his more Northern home, returns as satisfactory as it afforded to these Islanders of Ohio, and the result of all my investigation and enquiry has fully satisfied me that we can, in this part of Canada at least, raise the Delaware in greater perfection, and of higher flavour, than any that I saw upon the Islands. It is true that at the time of my visit the best of the crop of Delawares had been gathered, but the condition of the remaing fruit and of the foliage of the vines told an unmistakable tale. If these conclusions be correct, what a field of enterprise and remunerative industry is opened to us. A vineyard of the Delaware grape in full bearing will easily yield three tons of grapes to the acre. An acre of land may be set down say as worth one hundred dollars. Suppose that it costs one hundred and fifty dollars to get it planted with first class Delaware vines, and another hundred dollars to put up a suitable trellis, and fifty dollars a year for four years to cultivate it. This will make a total cost of five hundred and fifty dollars for the acre of vineyard. One crop of three tons at ten cents per pound will repay the entire outlay.

Such are my convictions on this subject that I intend to plant a vineyard of five acres next spring with Delaware vines, and should we live to see its first full crop, I will tell you just what it has cost, and what it yields.

St. Catharines, Nov. 9, 1865.

Yours truly,
D. W. BEADLE.

CATCH 'EM ALIVE O!—Parties troubled by night trespassers on their garden rights, may possibly pick up a suggestion from the following, which we cull from the *Gardener's Magazine*.—A gentleman who had long been subject to the nocturnal visitation of thieves in his orchards, wishing to preserve his property without endangering any one's life, procured from an hospital the leg of a "subject," which he placed one evening in a steel trap in his garden, and next morning sent the crier round town to announce that "the owner of the leg left in Mr.——'s grounds last night, might receive it upon application." He was never robbed again.

NOVEL METHOD OF WATERING PLANTS—While travelling in Ohio last summer, during that exceedingly dry season, I noticed in a friend's garden a contrivance for watering plants, which struck me as being the best that has as yet come to my knowledge. It may be old to you and to some of your many readers, yet will venture to give it. It was nothing more than the principle of capillary attraction, applied to moistening the earth around cucumber vines. A vessel containing the water was placed near the plants, from which extended a piece of old cloth to the roots of the plant. Thus water was conveyed from the vessel to the plant slowly, keeping the ground constantly in a good degree of moisture. One vessel answered for several hills. This method I think much superior to pouring on water, which generally flows off and hardens the ground, sometimes injuring the plant more than if it had received no water at all. I also saw in another garden another method, equally good, in practical operation. A barrel with both heads out was set in the ground half-way, and partly filled with manure. Around the outside of the barrel the cucumbers were planted. All watering was done through the barrel and the manure. The water reaches the roots from beneath, and keeps the soil moist and rich. In both methods the plants were more thrifty than those treated in the common way.—*Cor. Rural New Yorker.*

A TREE-DIGGER—One of the most complete affairs we have seen is a machine for taking up trees, in nurseries, for shipment, which is used by Mr. George W. Turner of this city. Drawn by six horses, and manned by six persons, it passes at once on both sides and *under* a row of trees, as rapidly as a team in ordinary ploughing, and leaves the trees erect, with their roots still covered with dirt, but in such a position that they can be lifted readily for packing. Those not needed can be left standing until they are needed. This machine will dig 30,000 good sized trees in one day, while by the ordinary method it takes six men a day to dig one thousand trees, and then they do not take up as many of the roots as are secured by this machine. We speak of this matter merely as a novelty, quite interesting to any man who has the leisure to examine it.—*Springfield. Ohio, News and Republic.*

TOBACCO FROM EGYPT.—Bayard Taylor informs the editor of the *Rural Advertiser*, Philadelphia, that he raised the present season a few plants of the real *Latakia Tobacco*, probably the first ever grown in the United States. The seed was brought from Egypt, and he considers the plants he has grown fully equal to any he ever saw on Mount Lebanon, from whence the celebrated Latakia tobacco comes. It is quite a distinct species, having a broad velvety leaf, and a pale yellow blossom. No seed for distribution until another year.

Agricultural Intelligence.

Wentworth and Hamilton Agricultural Societies.

REPORT OF THE JUDGES ON THE ROOT CROPS OF 1865.

We have been favoured by the Secretary, Mr. W. A. Cooley, with the annexed report of the committee appointed, by the above societies, to examine the fields of turnips, carrots, and mangel wurzel, which had been entered, by their respective proprietors, for the annual competition. The results are highly interesting, and will abundantly repay an attentive perusal.

The undersigned judges, appointed to award prizes at the Annual Turnip Match for the year 1865, submit the following report:—

The duty assigned was to award a 1st, 2nd, and 3rd prize, for fields of turnips of not less than four acres; and a 1st, 2nd, and 3rd prize for fields of turnips of not less than one acre. Our rule in each case was to measure off a square of 25 feet (being within a fraction of the 70th of an acre), in such portion of the field as presented a fair average of the whole, and to weigh and measure the produce carefully.

1st We proceeded to Edward Markle's, Lot No. 12, in the 6th Con. of East Flamboro'; 4 acres of Purple-top Swede; soil, sandy loam; ploughed once in the fall and twice in the spring, then ridged about 24 inches apart; seed sown by hand; cultivated three times and hoed twice; yield, 697½ lbs ×70=24 tons 825 lbs, or 813$\frac{45}{70}$ bushels per acre.

2nd. Matthew Burns, Lot No. 14, in the 4th Con. of East Flamboro'; 2½ acres Laing's Purple-top and Skirving's Swede; soil, sandy loam, barley stubble; ploughed in the fall and once in spring, manured in the drills with 18 loads barn yard manure, sown on the 10th June, in drills 24 inches apart, thinned, and hoed twice and cultivated once; yield, 520 lbs ×70 =18 tons 400 lbs., or 606$\frac{40}{70}$ bushels per acre

3rd James McMonies, Lot No. 5, in the 4th Con. of East Flamboro', soil, sandy loam, oat stubble; ploughed twice in the spring, and manured with 15 loads barn-yard manure per acre; sown 20th June, 3 lbs. seed per acre; variety, old Purple-top; yield, 400½ lbs.×70—14 tons 35 lbs, or 467$\frac{15}{70}$ bushels per acre.

4th. Thomas Stock, Lot No. 9, in the 3rd Con. of East Flamboro'; soil, clay loam, about 6½ acres, oat stubble, ploughed in the fall, and manured with 12 loads of barn-yard manure to the acre, ploughed twice in the spring, with proper harrowing and rolling to put in good tilth; commenced sowing in drills on the 17th June, with about 3 lbs. of seed per acre, hand hoed twice and cultivated three times; variety, Purple-top Swede; yield, 686 lbs ×70 —14 tons 56 lbs., or 800$\frac{28}{70}$ bushels per acre.

5th George A. Stock Lot No. 8, in the 3rd Con. of East Flamboro'; soil, sand loam, oat stubble, ploughed in the spring, harrowed and twice cultivated with fallow cultivator, manured at the rate of 17 loads of barn-yard manure per acre, manure ploughed in and harrowed three times, drills 23 inches apart, hoed twice and cultivated three times; yield, 573 lbs.×70=20 tons 110 lbs., or 668$\frac{30}{70}$ bushels per acre.

6th. John Weir, Lot No. 4, 1st Con. of West Flamboro'; 8½ acres.—soil, clay loam, oat stubble, manured with 15 loads of barn-yard manure per acre, ploughed in the fall with trench plough 8 inches deep, ploughed twice in the spring, harrowed and rolled until sufficiently fine; sown in drills 28 inches apart, on the 3rd, 7th, 8th, 9th and 10th June, with Purple-top and Watson's Improved Purple-top Swede, about ¾ of the former and ¼ of the latter, 3 lbs of seed per acre, manured in the drills with 400 lbs. bone dust, and 100 lbs. Coe's Superphosphate to the acre, hoed three times and cultivated three times, yield, 651½ lbs. ×70—23 tons 1351½ lbs., or 798$\frac{53}{70}$¼ bushels per acre.

7th. George Leith, Lot No. 41, 1st Con. of Ancaster; 5 acres,—soil, clay loam, oat stubble, ploughed in the fall, 12 loads of barn-yard manure, and 143 lbs. Coe's Superphosphate, drilled in when the seed was sown, horse hoed once, and hand hoed twice; yield, 620 lbs ×70=21 tons 1400 lbs., or 723$\frac{30}{70}$ bushels per acre; variety, Purple-top Swede.

8th. Robert Turner, Lot 48, 2nd Con. of Ancaster; 7 acres,—soil, clay loam, pea stubble, manured with 15 loads farm-yard manure per acre, ploughed in the fall with trench plough, ploughed again in spring, harrowed and rolled; seed sown 17th, 19th and 20th June, at the rate of 3 lbs. per acre, in drills 24 inches asunder; variety, old Purple-top and Laing's Swede; yield, 567 lbs.×70=19 tons 1690 lbs., or 661½ bushels per acre.

9th. Peter Grant, Lot No. 8, 1st Con. of Barton; 6 acres,—soil, sand loam, barley stubble, ploughed in the fall and in the spring, manured with 15 loads of farm yard manure and leached ashes per acre; seed sown from 17th to 27th June, 2½ lbs. per acre, in drills 2 feet apart; variety, Skirving's King of Swede; yield, 636 lbs.×70=22 tons 520 lbs., or 742 bushels per acre.

10th George Barnes, Lot No. 8, 3rd Con. of Barton, about 3 acres; soil, sand loam, oat stubble, ploughed in the fall and spring, and manured with 20 loads manure, and 7 bushels salt per acre; seed sown 21st June, 3 lbs. per acre, variety, Purple-top Swede; yield, 350 lbs ×70—12 tons 500 lbs., or 408$\frac{40}{70}$ bus. per acre.

RECAPITULATION.

Result of examination of 4 acre fields.—

Edward Markle,	24 tons	8 cwt.	20 lbs.
James McMonies,	14 "	0 "	33 "
Thos. Stock,	24 "	0 "	20 "
John Weir,	23 "	10 "	32½ "
George Leith,	21 "	14 "	00 "
Robert Turner,	19 "	16 "	19 "
Peter Grant,	22 "	5 "	20 "

Result of examination of 1 acre fields:—

M. Burns,	18 tons	0 cwt	40 lbs.
George A. Stock,	20 "	1 "	10 "
George Barnes	12 "	5 "	00 "

With the above results before us, we award for the 4 acre field, 1st prize to Edward Markle, of East Flamboro'; the 2nd prize to Thomas Stock, of East Flamboro', and the 3rd prize to John Weir, of West Flamboro'.

For the one acre fields, we award the 1st prize to George A. Stock, of East Flamboro'; the 2nd prize to M. Burns, of East Flamboro', and the 3rd prize to George Barnes, of Barton.

CARROTS.

We were also appointed to award a 1st and 2nd prize for the best field of carrots, of not less than ¼ acre. Our rule was to select an average of the field and measure off 12½×25 feet, being about the 140th part of an acre, and weigh and measure carefully.

1st. Edward Markle, Lot No. 12, 6th Con., East Flamboro'; soil, sand loam, ploughed once in the fall and twice in the spring, manured after ploughing in the spring, then ridged up about 24 inches apart, hoed twice and cultivated three times; yield, 312½×140=23 tons 1985 lbs., or 799$\frac{45}{70}$ bushels per acre.

2nd. M. Burns, Lot No. 1, 4th Con., East Flamboro'; soil, sand loam, in turnips last year, ploughed in the spring no manure, 3 lbs. of seed per acre, sown on the 13th April, in drills 24 inches apart, thinned and hoed three times; yield, 260¾ lbs.×140=18 tons 500 lbs., or 608$\frac{25}{70}$ bushels per acre.

3rd. James McMonies, Lot No. 5, 4th Con. of East Flamboro'; soil, sand loam; yield, 261¼ lbs.×140=18 tons 615 lbs., or 610$\frac{45}{70}$ bushels per acre.

4th. Dr. Miller, Lot No. 1, 2nd Con. of West Flamboro'; soil, sand loam, in turnips last year, ploughed in manure in the fall at the rate of 24 loads per acre, then cultivated ploughed, harrowed, and rolled, ploughed in the spring, then drilled 24 inches apart. A small track was then made on the top of the drill in which Coe's Superphosphate was sown, at the rate of 300 lbs. per acre; 8 lbs. seed per acre, thinned three times during the season, yield, 257½ lbs.×140 =18 tons 50 lbs., or 600$\frac{30}{70}$ bushels per acre.

5th. John Weir, Lot 4, 1st Con of West Flamboro'; soil, clay loam, one-third of an acre, oat stubble, 18 loads of farm-yard manure per acre, ploughed 9 inches deep, ploughed once in the spring, harrowed and rolled, sown in drills 24 inches apart, on the 13th May, with White Belgian seed, at the rate of 4 lbs. per acre, manured in the drill with farm-yard manure, at the rate of 10 loads per acre; yield, 359 lbs. ×110=25 tons 260 lbs., or 837$\frac{40}{70}$ bushels per acre.

6th. Charles Rymal, Lot No. 20, 8th Con. of Barton; soil, heavy black loam, oat stubble, ploughed in the fall and in the spring, 20 loads stable manure to the acre; seed sown on the 15th May, in drills two feet apart, at the rate of 3 lbs seed per acre, yield, 307 lbs ×140—21 tons 980 lbs, or, 716$\frac{20}{70}$ bushels per acre.

7th Robert J. Hamilton, City of Hamilton; soil, black gravelly loam, in potatoes last year; yield, 279 lbs.×110—19 tons 1060 lbs., or, 651 bushels per acre.

8th. George Barnes, Lot No. 8, 3rd Con. of Barton; soil, sand loam, in potatoes last year, ploughed in spring; seed sown May 2nd and 3rd, in drills 2 feet apart, at the rate of 3 lbs per acre; yield 383 lbs× 140=26 tons 1620 lbs., or, 893$\frac{40}{70}$ bushels per acre.

RECAPITULATION.

Result of examination of fields of carrots:—

Edward Markle,	E. Flamboro',	23 tons	10 cwt	85 lbs.
Matthew Burns,	E. Flamboro',	18 "	5 "	00 "
Jas. McMonies,	E. Flamboro',	18 "	6 "	45 "
Dr. Miller,	W. Flamboro',	18 "	0 "	50 "
John Weir,	W. Flamboro',	25 "	2 "	60 "
Chas. Rymal,	Barton,	21 "	9 "	60 "
R. J. Hamilton,	Hamilton,	19 "	10 "	60 "
George Barnes,	Barton,	26 "	16 "	20 "

With the above results before us, we award, for the ¼ acre of carrots, the 1st prize to George Barnes, Barton; the second prize to John Weir, West Flamboro'.

MANGEL WURZEL.

We were also instructed to award a first and second prize for the best field of mangel wurzel, of not less than ¼ of an acre,

1st. R. J. Hamilton, City of Hamilton; soil, black gravelly loam; variety, Long Red; yield, 398¼ lbs.× 110=27 tons 1970 lbs., or, 929$\frac{80}{70}$ bus., per acre.

2nd. Peter Grant, Lot No. 8, 1st Con. of Barton; soil, sand loam, barley stubble, ploughed in the fall and in the spring, manured with 15 loads farm-yard manure and leached ashes, per acre; sown 25th May, in drills 2 feet apart; variety, Long Red. Long Yellow; yield, 280 lbs.×140=19 tons 1200 lbs., or, 653$\frac{20}{70}$ bus., per acre

3rd. George Barnes, Lot No. 8, 3rd Con. of Barton; soil, black clay loam; variety, Long Red; fall wheat stubble ploughed in the fall and spring; sown 25th May, in drills 26 inches apart; yield, 413 lbs.×140= 28 tons 1820 lbs., or, 963$\frac{40}{70}$ bushels per acre.

RECAPITULATION.

Result of examination of fields of mangel wurzel.—

R. J. Hamilton.	City of Hamilton.	27 tons	17 cwt.	90 lbs.
Peter Grant.	Barton.	19 "	12 "	00 "
George Barnes.	Barton.	58 "	18 "	20 "

With the above results before us, we award, for ¼ acre mangel wurzel, the 1st prize to George Barnes, Barton; and the 2nd prize to R. J. Hamilton, City of Hamilton.

Before concluding this report, the Judges have much pleasure in bearing testimony to the great care and improved culture of the different fields of turnips which they inspected. From the great increase in the breadth sown, there is satisfactory evidence shown that our farmers now look upon the turnip crop as one of the most important grown upon the farm. The general average has not been so large this season as in former years, owing to the very dry weather which prevailed about the time of sowing. With reference to the different varieties sown, the judges have no hesitation in recommending the following for heavy upland soils, viz: Skirving's Purple Top, and Skirving's King of the Swedes; and for alluvial, lighter, and more lively loamy soils, the Old Purple Top, Watson's, Laing's Improved, and Bronze Top. They have also much pleasure in drawing the attention of the agriculturists of Canada to a new turnip, which they saw growing on the farm of Mr. Robert Turner, of Ancaster, named the "Grey Stone." It is a white-fleshed turnip, suited for late sowing, and we understand, keeps in good condition until the end of January. It grows to a very large size, and is well worthy of extended cultivation. The judges are pleased to observe that the culture of carrots is receiving that attention which they so justly deserve. They also notice that greater care is exhibited in thinning and keeping them clean than was the rule in past years. We were also pleased to notice that the cultivation of mangel wurzel is on the increase. This crop deserves still more extended cultivation. They are invaluable for milch cattle, as well as for fattening stock. In conclusion, the judges congratulate the farmers of Wentworth on the deep interest exhibited in the culture of field root crops, evincing, as it does, rapid progress toward a thorough system of profitable and scientific farming; and they hope the day is not far distant when every county in Canada will hold similar matches.

All of which is respectfully submitted.

(Signed,) JAMES FLEMING, Toronto.
GEORGE LAING, Hamilton.
November, 1865. JNO. A. BRUCE, Hamilton.

PROTECTION AGAINST THE CATTLE PLAGUE.—It is stated that the collector of the port of Boston is co-operating heartily with the Cattle Commissioners of Massachusetts to prevent the introduction of the murrain into that State. He has ordered all officers, who may know of any cattle about to land on our shores from Europe, to hold them in quarantine till they can be examined by the Commissioners, and pronounced free from infection. The Mass. Ploughman, remarking on the above, observes, that "if all custom-house officers throughout the country, would adopt the the same course, or if Congress would pass a law subjecting such animals to a rigid quarantine, we should feel confident of escaping the infection."

Huron County Ploughing Match.

To the Editor of THE CANADA FARMER :

SIR,—Our annual ploughing match this year has been very successful, both as regards the value of the prizes and the number of the competitors. I think no apology necessary for asking you to make room for a short description of it in the only agricultural paper we have in the Province.

Mr. Bell, the enterprising agricultural implement maker, of St. George's, offered to give a reaper as a prize for the ploughing match this year. The offer, I need scarcely say, was accepted. Such liberality was infectious, and other donations came in rapidly. The Hon. Donald McDonald, M. L. C., gave $40; James Dickson, Esq., M. P. P., gave an iron plough, worth $40; McFaggart, of Clinton, a fanning mill; Runceman, of Goderich, an iron plough: McPherson & Co., of Clinton, a cultivator; Sevel, of Clinton, a plough; Horton, of Goderich, a riding saddle; Fulton & Rude, of Egmondville, a neck-yolk and whipple trees; Jno. Gray, plough maker, of Egmondville, $10 in cash; the County and Branch Societies making up nearly $100 more. The whole was divided into nine prizes for men, and ten for boys. Such a formidable prize list, I am positive, was never ploughed for in any County in Canada, on any previous occasion. The "match" came off on Tuesday, the 31st October, on the farms of Messrs. Carnahan, and McLean, in the township of Tuckersmith, three miles from Harperhag, on the Buffalo and Goderich R. R.,—the men being at Carnahan's, and the boys at McLean's. The morning was wet and stormy, till about 11 o'clock, which made it very disagreeable, but the after part of the day was pleasant enough. Twenty-four men entered the lists—most of them stout "brawny chiels"—the very pick of our ploughmen. The field was a clay loam, and with the exception of some gravel spots here and there was very well calculated for the purpose. A start was made at 10 o'clock, and by 4, all were finished. Great interest was manifested by the spectators during the match. The judges must have had an arduous task. Their decisions caused some dissatisfaction, but as they were all practical ploughmen, no doubt they had good reasons to assign for their respective awards. The first prize—the Reaper—was presented to James Thomas, Tuckersmith. Some of the other awards in the men's class, I have not yet ascertained. The boys' field was a mile and a quarter from the men's, and was reached by a road ankle deep in mud, but the sight amply repaid the tramp. They had a splendid field, superior to the men's, older sod, a smoother surface, and less gravel. I found twenty-eight lads stripped and at work, holding on with a determination that was pleasant to look at. Some half dozen of them were the smallest fellows I ever saw holding a plough. The scene was a hopeful picture of "Young Canada." Their ploughing was the theme of general admiration,—in fact some of it was sweeter to the eye than any of the men's.

The judges awards were as follows:—1st, A. Thompson, Stanley; 2nd, R. Sharpe, Stanley; 3rd, Jno. McTavish, Tuckersmith; 4th, D. McLean, Tuckersmith; 5th, S. Carnahan, Tuckersmith; 6th, Peter McDugald, Goderich; 7th, H. Wise, Goderich; 8th, J. Carnahan, Tuckersmith; 9th, W. Chesney, Tuckersmith; 10th, A. Broadfoot, Tuckersmith.

The men at Mr. Carnahan's, and the boys at Mr. McLean's, were treated to a substantial dinner, to which, no doubt, their keen appetites enabled them to do ample justice. HUGH LOVE, Senr.

Hill's Green P. O.

A GIGANTIC PORKER.—We learn from the *Western Rural* that "a hog was exhibited at a fair in Fountain county, Ind., recently, that weighed 1,118 pounds. The fact is well authenticated."

A MONSTER CARROT.—William Dawson, Esq., of East Zorra, has brought to our office, for the inspection of the curious, what we believe will be admitted to be the largest specimen of a field carrot grown in this or any other country; and as the sample is by no means an unfair one of Mr. Dawson's crop generally, we may claim for him the reputation of being the most successful root grower in this section—a result the excellent character of his land, with his mode of tillage, will enable him long to enjoy. The carrot, measured in the presence of William Grey, Esq., the Secretary of the North Riding Agricultural Society, a trifle over 40 inches, exclusive of the slightest portion of top. We shall be pleased to hear of another to equal this.—*Woodstock Times.*

The Apiary.

Management of the Apiary for December.

BY J. H. THOMAS.

IF preparations have been made for winter, in November, but little is required in this month. Stocks wintered out of doors, should be protected from severe winds and storms. If they should become banked over with snow, let them remain, if they have been properly ventilated, as they will winter all the better. Let it be remembered that the more vapour that is allowed to escape by upward ventilation, the less dampness and frost there will be in the hive. I would, however, again advise that all stocks be housed. If not already put into winter quarters, it should be attended to at once. If it is desirable to winter stocks that are likely to want for honey before spring, a few pounds of sugar sticks (the whiter and drier the candy is, the better,) may be laid upon the top of the frames, in my moveable comb hives, and the bees will make use of it as they need. In common box hives that are inverted, it may be placed on the combs. All hives that are situated where mice can get at them, should have their entrances protected with wire cloth, unless it is desirable to let the bees pass in and out. In that case the entrance should be contracted. A near neighbour, lost a fine stock last winter, by neglecting to guard against mice. Strong stocks that have been properly housed according to the directions given in the "Bee-keepers' Guide," will require no more attention; let them remain undisturbed.

Differences between Langstroth and "The Canadian Bee Keepers' Guide."

To the Editor of THE CANADA FARMER.

SIR,—It is with pleasure that I reply to your correspondent "Briar," who, in No. 20, Vol. II., of THE CANADA FARMER, makes some remarks on the difference of opinion between Langstroth and myself, believing that he will see the truth on those "important points."

I am well aware that Langstroth, after having admitted that a tall hive had some "obvious advantages," still claims what "Briar" has quoted, viz.: "that a hive long from front to rear, and moderately low and narrow, seems on the whole to unite the most advantages," and, therefore, makes his hives only ten inches deep. Now what are the advantages claimed by Langstroth in his shallow hives, over tall ones? He says they greatly facilitate the handling of the frames, besides diminishing their number and cost." Allow me to enquire how that can be? as my hive contains only *eight* frames, and Langstroth's *ten*. The advantage, therefore, in this respect, is in favour of my hive. I also fail to see how the shape of the frame can materially affect the handling of them. This, however, I offer to do, I will remove the frames from three of my hives while Langstroth, or any other man, is removing the frames from two of the Langstroth hives. It is not, however, the shape of my frame that enables me to to handle them with greater facility, but the construction of the hive. Again, he remarks in a foot note, concerning tall hives: "The *deeper* the frames, the more difficult it is to make them hang true on the rabbits, and the greater the difficulty of handling them without crushing the bees, or breaking the combs." Now if Langstroth found difficulty in making deep frames hang true, I do not.—Hence that objection amounts to nothing, if my hives are used.

As to the difficulty of handling deep frames, experience proves that such was only imaginary on the part of Langstroth. I never think of crushing bees or breaking combs. In another foot note Langstroth remarks, that Quimby informed him that bees wintered in hives of the shape of his about as well as in tall hives. Yet it appears after all that Quimby prefers a *tall* hive, for he makes his frames deeper than Langstroth's, and calls his hive "Langstroth's improved." Nearly all eminent Apiarians use a tall hive in preference to a shallow one. Says J. S. Harbison, "many eminent Apiarians bear testimony to the superiority of deep hives over those that are low and shallow." Experience has fully convinced me that a deep hive, properly constructed, combines more advantages than any other shape in use. Bees are far more likely to build their combs straight in deep frames than in shallow ones. These and many other points were not as well understood when Langstroth constructed his hive as they are now.

"Briar" again quotes from Langstroth, who speaks of moveable bottom boards thus: "If moveable bottom boards are used, it is next to impossible to prevent the moth from laying her eggs between them and the edges of the hives." It would appear from the above quotation that Langstroth supposed that all moveable bottom boards must rest against the edges of the hives. Such is not the case with my hives, and experience has proved that no objection can be raised against them on account of moths, while the advantages given to the apiarian by them, as compared with a stationary bottom board are many. Says Mr. Holden, an experienced apiarian of Merrickville, C. W., speaking of my hive, "the bottom board is constructed upon a plan the best that I have ever seen." "Briar" also seems to think that smoking bees often will make them more irritable, and quotes from Langstroth to shew that there is a difference of opinion between us on that point; but I fail to see any great difference. Langstroth does not say that smoke makes the bees more irritable, but that it failed in its effect after it was used two or three times a day, to make the bees fill themselves with honey. He says: "The cunning creatures, instead of filling themselves with honey, rushed out to attack me." I do not understand that they rushed out to attack him because irritated with the smoke, but because it is their nature to do so when often disturbed, unless they are filled with honey. If "Briar" would be fully satisfied, let him select two stocks next season, of about equal strength, and operate with each stock three times a day. With one stock use smoke according to directions given in the "Canadian Bee Keepers' Guide," with the other stock use no smoke, and see which becomes the more irritable. Again, "Briar" finds a difference of opinion between Langstroth and myself, I having stated that bees do not die of a disease called dysentery, while Langstroth mentions it as the effect of improper ventilation, dampness, &c., &c. Now, on this point there is really no essential difference, as I freely admit that bees die from an undue accumulation of fæces, discharged in and about the hive, being the effect of improper ventilation, dampness, &c.; but not dysentery; for if, at such times, the weather was sufficiently warm to allow the bees to fly and discharge themselves away from the hive, there would be no disease and no death. Says Metcalf, "Once during winter it is quite necessary that bees should be allowed to fly, or they are apt to be attacked with what is improperly called 'dysentery.'" If, however, bees are wintered in a proper place, where they cannot freeze, and properly ventilated, no undue accumulation of fæces will take place, and there will be no necessity for their flying to discharge themselves, and they will never die from a disease called "dysentery."

BROOKLIN, C. W. J. H. THOMAS.

Poultry Yard.

Dressing Poultry for Market.

THE following hints on poultry-dressing are gathered from a circular lately issued by Morrison, Taylor & Co., of this city. The instructions are so thoroughly practical, that we believe we will be consulting the interests of such of our readers as are in the habit of marketing fowls, by giving them a place in our columns.

"We would here remark that "scalliwag" poultry always sells low in this market, and that between a well dressed fowl and a poorly dressed one, the difference in price will make a fair profit. 1st. Food in the crop injures the appearance and sale, therefore keep from food twenty-four hours before killing. 2nd. Opening the veins in the neck is the best mode of killing. If the head be taken off at first, the skin will recede from the neck-bone, presenting a repulsive spectacle. 3rd. Most of the poultry sold in this market is "scalded," or "wet picked," "dry picked" is preferred by a few, and sells, to a limited extent only, at full prices. Poultry may be picked dry without difficulty, if done without delay after killing.

For scalding poultry, the water should be as near to the boiling point as possible, without actually boiling. The bird held by the legs, should be immersed and lifted up and down in the water three times. Continue to hold the bird by the legs with one hand while plucking the feathers with the other, without a moment's delay after taking out. If skilfully handled in this way, the feathers and pin-feathers may all be removed without breaking the skin. A torn or broken skin greatly injures the appearance. 4th. The intestines should not be "drawn." After removing the feathers, the head may be taken off and the skin drawn over the neck bone and tied. This is the best method, though much comes to market with heads on. 5th. It should next be "plunged," by being dipped about two seconds into water nearly, or quite, boiling hot, and then at once into cold water about the same length of time. It should be *entirely cold*, but *not frozen*, before being packed. 6th. In packing use clean hand-threshed rye straw. If this cannot be had, wheat or oat-straw will answer, but be sure that it is clean and free from dust. Place a layer of straw at the bottom, then alternate layers of poultry and straw, taking care to stow snugly, back upwards, legs under the body, filling vacancies with straw, and filling the package so that the cover will drive down very closely upon the contents, to prevent shifting on the way. Boxes are the best packages, and should contain from, say 150 to 300 pounds.

Poetry.

Zong of the Kerlock.*

The kerlock plant is a zite to zee
As it zines in the vields like gowld;
But all yent gowld that glitters free,
I was once by my veather towld.

Zo I take a heow and cut un all up,
All out of the barley ground;
And arter that I'd like to kneow,
Where a bit of nast can be vound

But a zays, zays he, it aint no use
For to go to a girt expence;
For twull come again whatever theo doos,
For a year or two vrom hence.

But passon zays as every weed,
Like the turm ts and whate we seow,
Must all come up vrom a sort o' zeed,
Zo I wunt let un zeed if I neows.

But I'll take a heow and heow'n all clane,
All out of the barley ground;
Vor if I deant let un zeed, tis plane
Not a bit or nast will be vound.

*Charlock or wild mustard.

Markets.

Toronto Markets.

"CANADA FARMER" Office, Dec. 1, 1865.

The supply of produce brought into market during the past fortnight has been unusually small. Prices were well maintained, there being little change to note from our last quotations. The country roads are now so soft that it is impossible to team heavily loaded waggons to market. In consequence, business in the grain market has been light, although there is a better demand springing up, principally for local consumption.

Stocks of all kinds are small, as the export movement keeps up with the receipts. We are informed that there is still a great quantity of grain in the hands of farmers, but until the winter roads are formed, it is not likely much will find its way into market. Fall wheat has been dull, with very light receipts. The season for shipping being now all but over, dealers are not so anxious to buy. Oats have been firm, prices remain unchanged. In flour little or no business has been done. Prices remain merely nominal

General business is very dull. Latest advices from Europe offer little encouragement. Local trade is limited to the merest retail.

Flour—market nominal, no demand, and few transactions.
Fall Wheat in fair demand and steady, at $1 40 to $1 50, according to quality.
Spring Wheat—more enquiry; Sales at $1 12 to $1 18.
Barley dull at 60c to 70c per bushel.
Peas quiet, at 52c to 55c.
Oats quiet, at 33c to 35c.
Corn unchanged.
PROVISIONS improving. *Butter* inactive, at 18c to 20c per lb for keg, choice dairy, 20c to 21c, rolls, 27c to 30c, retail.
Rye 53c to 56c.
Cheese—more plentiful, American prime, 14c to 15c.
Eggs—market steady, with fair supply; selling at from 20c to 22c for packed; 24 to 26c for fresh.
Potatoes—Plentiful, and of excellent quality, with fair demand, wholesale, 25c; retail, 30c.

Hogs—dressed, arriving freely, and selling at $8 50 to $9 25 per cwt for heavy weights, and $7 to $8 for light weights, pork, quiet; mess, $24 to $25 per brl; prime do., $21 to $22.
Hay—in good supply at from $10 to $14 50 per ton.

LIVE STOCK.—The market is moderately active and prices are firm. The figures hereunder are offered by the butchers and drovers in this market per 100 lbs., dressed weights:—*Cattle*, 1st Class, $7, do. 2nd class, $6, do. inferior, $5 to $5 50. *Calves*, $5 to $6. *Sheep*, prime heavy, each, $5 to $6; do. light, each, $4 to $4 50 *Lambs*, each, $2 50 to $3. *Hogs*, live weight, $7 50 to $8. Do. dressed weight, $8 90 to $10.

FRUIT.—*Apples*, farmers packed, $1 50 to $2 50, good shipping barrels, $2 to $4.

Hamilton Markets.—Nov. 28.—*Flour*,—XXX, $7 50, extra, $6 to $6 50; fancy, $6; superfine, $5 50. *Bran*, per 100 lbs., 62½. *Beef*, per 100 lbs, $4 50 to $6 *Mutton*, per 100 lbs., $4 to $5. *Lamb*, per 100 lbs., $4 50 to $5. *Pork*, per 100 lbs., $8 to $8 50. *Potatoes*, per bushel, 60c. *Onions*, per bushel, 50c. *Apples*, per bag, $1 to $1 25 *Butter*, per lb, 22c to 26c. *Eggs*, per doz., 25c *Lard*, per lb., 20c. *Hay*, per ton, $10 to $12. *Straw*, per ton, $7 to $8 *Cordwood*—No 1, $4 50 to $5 00; No 2, $3 to $4 00. *Tallow*, rough, per lb., 7½c; do., rendered, 10c. *Hides*, green, per 100 lbs., $6, do, dry, $9 to $10. *Sheepskins*, $1 to $1 25 each. *Bread*—4 lb. loaf, 14c to 15c. *Spectator*.

London Markets. Nov. 28.—*Fall Wheat*—Ordinary samples $1 20 to $1 30, good to extra $1 35 to $1 45; choice at $1 50 to $1 60. *Spring Wheat* $1 12 to $1 18. *Barley*—bright malting 55c to 60c *Peas*—Round white 50c *Oats* 30c. *Corn* 62½c to 70c. *Buckwheat* 40c to 45c. *Flax seed* $1 50 to $1 75 per 50 lbs. *Butter*—prime dairy 20c, No. 1 store 20c to 22c, fresh, by the basket, 22c. *Dressed hogs* $8 to $8 37½ per 100 lbs. *Skins*—Green hides $6, dry, $11 per 100 lbs; calf dry, 18c sheepskins, fresh, 87½c to $1 50 Wool, pulled, per lbs. 40c *Tallow* at 7c; rendered 10c. *Hay*, per ton, $7 to $10 *Straw* per load $2 50 to $3 50; peas $2 to $3 per load. *Potatoes*, by the load, 30c to 40c. *Carrots*, by the load, 15c to 20c per bushel. *Turnips* 10c to 15c per bushel.—*Free Press*.

Galt Markets. Nov. 28.—*Flour*, per 100 lbs, $3 to $3 75. *Fall Wheat*, per bushel, $1 30 to $1 45. *Spring Wheat*, per bushel, $1 to $1 12½. *Barley*, per bushel, 60c to 65c. *Oats*, per bushel, 30c. to 32c. *Flax seed*, per bushel, $1 45 to $1 40. *Butter*, per lb, 18c to 20c. *Eggs*, per dozen, 18c to 20c. *Straw*, per load, $2 to $2 50. *Peas*, per bushel, 60c to 62½c. *Beef*, per 100 lbs, $6. *Pork*, per 100 lbs., $7 to $8. *Calfskins*, over 8 lbs., 8c. *Lambskins*, 75c to $1 *Potatoes*, per bushel, 40c to 45c. *Hay*, per ton, $8 to $10. *Apples*, per bushel, 37½c to 75c.—*Reformer*.

Oswego Markets. Nov. 28.—*Flour*—The market is unchanged, with a good local, interior, and eastern demand, at $8 75 to $9 for brands from No. 1 spring, $10 25 to $10 50 from red winter, $11 25 to $11 50 from white, and $12 25 to $12 50 for double extra from prime white wheat. GRAIN—*Wheat* in light milling demand; No. 1 Milwaukee club at $1 80, 61 bags white Canada at $2 35, and 55 do, at $2 45. *Corn* in demand, and the market is without material change; No. 1 Indiana at 81c to 82c.—*Barley* and other grains quiet, and quotations nominal. MILL FEED—*Shorts* are selling at $16 to $17, and shipstuffs at $23 to 24 per ton, according to quality *Corn meal*—100 lbs in bags $2 to $2 10; do. unbolted $1 90 to $2; 50 lbs bolted in paper sacks $1 05; do in cloth do $1 15 *Salt* unchanged, Onondaga is quoted at $2 45 per brl, and 14 lb sacks at 20c. *Waterlime* $1 60 wholesale, $1 70 retail per barrel. *Plaster* quoted at $1 50 per barrel.

New York Markets. Nov 29.—*Flour*—Receipts, 16,400 bbls; market dull and 5c to 10c lower for Western, and steady for good sound extra State, sales at $7 80 to $8 20 for superfine State; $8 40 to $8 55 for extra State; $8 60 to $8 75 for choice do; $7 70 to $8 15 for superfine Western, $8 20 to $8 65 for common to medium extra Western; and $9 to $11 25 for common to good shipping brands extra round-hoop Ohio. Canadian flour 5c to 10c lower; $8 35 to $8 60 for common, and $8 70 to $12 for good to choice extra. *Wheat*—Receipts, 14,340 bushels; market dull and without decided change; good fair Milwaukee club, $1 79 to $1 80. *Rye* quiet; sales 800 bushels at $1 16. *Barley* dull; Canada East, $1 10 *Barley Malt* dull. *Corn*—Receipts, 2,500 bushels; market quite firm at 91c to 94c for unsound, and 95c to 96c for sound mixed Western; 97c to 97½c for nearly yellow. *Oats* dull at 61c to 62c for Canadian, 64c for State and Western, and 49 to 56 for unsound. *Pork*—market lower; sales 10,000 bbls at $26 75 to $28 for mess, closing at $27 for regular. *Beef* steady. *Butter* quiet at 20c to 42c for Ohio; 35c to 46c for State.

LATEST MARKETS.—*Flour* closed heavy, 10c lower for Western. *Wheat* quiet and unchanged. Corn a shade firmer *Oats* declining *Pork* unsettled, mess $27 60 *Lard* steady at 18c to 23c.

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